CANADIAN GEOGRAPHICAL JOURNAL





THE CANADIAN GEOGRAPHICAL SOCIETY

OTTAWA, CANADA

-333666

HONORARY PATRON

His Excellency Major-General the Earl of Athlone, K.G., P.C., G.C.B., G.M.M.G., G.C.V.O., D.S.O.

HONORARY PRESIDENTS

CHARLES CAMSELL, C.M.G., B.A., LL.D. and J. B. TYRRELL, M.A., LL.D., F.G.S.

BOARD OF DIRECTORS

CHARLES G. COWAN, President

Gen. A. G. L. McNAUGHTON, Vice-President Hon. W. A. BUCHANAN, Vice-President R. C. WALLACE, Vice-President

Hon. A. E. ARSENAULT, Assistant Judge, Supreme Court, Charlottetown, P.E.I. MARIUS BARBEAU, National Museum of Canada,

ARTHUR BEAUCHESNE, Clerk of the House of

Commons, Ottawa LAWRENCE J. BURPEE, Secretary for Canada,

International Joint Commission, Ottawa
CHARLES CAMSELL, Deputy Minister, Department of Mines and Resources, Ottawa

Col. A. F. DUGUID, Director, Historical Section, Dept. of National Defence, Ottawa Maj.-Gen. W. W. FOSTER, Vancouver, B.C.

AUGUSTIN FRIGON, General Manager, Canadian Broadcasting Corporation, Ottawa K. A. GREENE, Ottawa

GILBERT LaBINE, Toronto, Ont.

F. D. L. SMITH, Toronto

Lethbridge

Charlottetown

Hon. W. A. BUCHANAN,

H. L. TRUEMAN, Ottawa

Hon. A. E. ARSENAULT,

J. A. WILSON, Vice-President O. M. BIGGAR, K.C., Honorary Counsel K. G. CHIPMAN, Honorary Treasurer E. S. MARTINDALE, Honorary Secretary

H. L. KEENLEYSIDE, Canadian Ambassador to

F. C. C. LYNCH, Department of Mines and Resources, Ottawa

B. R. MacKAY, Department of Mines and Resources, Ottawa

Lt.-Col. L. T. MARTIN, Ottawa Dean C. J. MACKENZIE, President of National Research Council, Ottawa

Lt.-Col. SIDNEY C. OLAND, Halifax, N.S. F. H. PETERS, Surveyor-General of Canada, Ottawa

H. M. SNYDER, Sundre, Alta. E. J. TARR, K.C., Winnipeg, Man. GRIFFITH TAYLOR, University of Toronto, Toronto,

Ont. Hon. T. VIEN, Speaker of the Senate, Ottawa J. C. WEBSTER, Shediac, N.B.

Editorial Committee

F. C. C. LYNCH, Ottawa, Chairman

Toronto M. Y. WILLIAMS, Vancouver

D. C. HARVEY, Halifax J. C. WEBSTER, Shediac F. J. ALCOCK, Ottawa

GORDON M. DALLYN, Secretary Lt.-Col. G. L. F. GRANT-SUTTIE, ROBERT ENGLAND, Sidney, B.C. W. EGGLESTON, Ottawa OLIVER MASTER, Ottawa GEORGE W. BROWN, Toronto R. J. C. STEAD, Ottawa

Executive Secretary and Editor

GORDON M. DALLYN

Auditors Davis, Boyce & Company, Chartered Accountants

->>> <<<

The Society's ambition is to make itself a real force in advancing geographical knowledge, and in disseminating information on the geography, resources and people of Canada. In short, its aim i to make Canada better known to Canadians and to the rest of the world.

As one of its major activities in carrying out its purpose, the Society publishes a monthly magazine, the Canadian Geographical Journal, which is devoted to every phase of geography—historical, physical and economic—first of Canada, then of the British Empire and of the other parts of the world in which Canada has special interest. It is the intention to publish articles in this magazine that will be

popular in character, easily read, well illustrated and educational to the young, as well as informative to the adult.

The Canadian Geographical Journal will be sent to each member of the Society in good standing. Membership in the Society is open to any one interested in geographical matters. The annual fee for membership is three dollars in Canada.

The Society has no political or other sectional associations, and is responsible only to its members. All money received is used in producing the Canadian Geographical Journal and in carrying on such other activities for the advancement of geographical knowledge as funds of the Society may permit.

->>>-

The inde Peri dian be fo The

adop Dom most autho as ec Add ing c

1,000 ada, all ne will l starti recei Me

Journ

grapi Cana Empi Journ Mexi South tries, payal

S Onto Toror (Te

Mem

Mont Str Euro 5 Up He

->>>->>

CANADIAN GEOGRAPHICAL JOURNAL

Published monthly by

THE CANADIAN GEOGRAPHICAL SOCIETY

49 Metcalfe Street, Ottawa

Editor - GORDON M. DALLYN

This magazine is dedicated to the interpretation, in authentic and popular form, with extensive illustrations, of geography in its widest sense, first of Canada, then of the rest of the British Commonwealth and other parts of the world in which Canada has special interest.

The articles in this Journal are indexed in the Reader's Guide to Periodical Literature and the Canadian Periodical Index which may be found in any public library.

The British standard of spelling is adopted substantially as used by the Dominion Government and taught in most Canadian schools, the precise authority being the Oxford Dictionary as edited in 1936.

Address all communications regarding change of address, non-delivery of Journal, etc., to the publication office, 1,000 St. Antoine St., Montreal, Canada, giving old and new address. On all new memberships, the expiry date will be printed on wrapper containing starting number. This will constitute a receipt for subscription.

Membership in The Canadian Geographical Society is \$3.00 per year in Canada and other parts of the British Empire, which includes delivery of the Journal, postpaid; in United States, Mexico, France, Spain, Central and South America, \$3.50; in other countries, \$4.00. Make membership fee payable at par in Ottawa.

Member Audit Bureau of Circulations

SPECIAL REPRESENTATIVES:

Ontario and Quebec: F. A. DALLYN Toronto office—21 King Street, E. (Tel. EL. 2863)

Montreal office-1,000 St. Antoine Street. (Tel. LA. 5566)

Europe: NORAH C. PERRY

5 Upper Dagnall Street, St. Albans, Herts., England.

CONTENTS

FEBRUARY 1945 + VOLUME XXX + NUMBER 2

CONQUEST OF THE NORTH-WEST PASSAGE BY R.C.M.P. SCHOONER ST. ROCH . . . 52

by J. LEWIS ROBINSON

by ARTHUR GAUNT

ONTARIO'S SUMMER ESTATES 80
by E. H. MURRAY

ONE SPOT OF EARTH . . . 100

AMONGST THE NEW BOOKS. VII

CONTENTS OF THIS JOURNAL ARE COPYRIGHT

ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE. MONTREAL, CANADA.





Top: R.C.M. Police schooner "St. Roch" leaving the harbour, Halifax, July, 1944.

R.C.N. photo

P

p

II N k oi ir

lo

g

v: fa

th Je

in

tı

sp H ti

da

M of

Left: Staff-Sgt. Henry A. Larsen, Captain and Navigator on the "St. Roch" R.C.N. photo

Conquest of the Northwest Passage by R.C.M.P. Schooner St. Roch*

by J. LEWIS ROBINSON **

THE SEARCH FOR THE NORTHWEST Passage forms an intriguing chapter in the history of Canadian exploration. The stories of early navigators who faced the dangers of polar pack-ice in tiny wooden sailing ships, travelling, with doubtful compasses, along uncharted coasts, are accounts of hardship, courage and perseverance. The fruitless quest for a route north of the North American mainland to the wealth of the Far East resulted in the exploration and charting of most of the numerous Arctic Islands of Northern Canada. As more and more knowledge of this inhospitable region was obtained through exploration, the trading incentive behind the search for a northwest route waned in the light of geographic facts which showed the route to be commercially impractical.

In the sixteenth century Europe began to look towards the new continent to the west, and expeditions from England, Spain, Portugal and France groped their way along the unknown coasts. At first this new land-mass was regarded chiefly as a barrier, of little value in itself, blocking the route to the fabled riches of the East. Exploration was interested in a way around or through it, and in 1576 Martin Frobisher first entered the Eastern Arctic seeking such a route. John Davis, who followed Frobisher's lead, reached Baffin Bay before the end of the century and noted several westward openings on the barren rocky coast.

Exploration in the early seventeenth century was side-tracked by the broad opening of Hudson Strait, and many years were spent in defining the limits of extensive Hudson Bay. The failure of several expeditions to find openings west of Hudson Bay dampened interest in the search in this

direction, and for a time exploration was neglected.

After the Napoleonic Wars expeditions from the British Navy renewed the search for a northern route through the sea reported north of America. Edward Parry entered Lancaster Sound in 1819 and twisted through eastward-moving ice-floes as far as Melville Island before freezing his ship in for the winter. The next season ice choking the channel to the westward prevented further progress, and Parry returned to England. In 1821 Parry tried the southern route through Hudson Strait and Foxe Channel, and reached the entrance to Fury and Hecla Strait before being stopped by ice. Later attemps to pass through this strait also failed, and it has not yet been navigated by other than Eskimo mariners. Further exploration by John Ross, beginning in 1829, confirmed the existence of Boothia Peninsula extending north from the mainland of Canada and discouraged all hopes for a passage through this region. Since Ross did not see Bellot Strait, the strategic opening to the west, it was believed that Somerset Island was part of this long barrier penin-

In 1845 Sir John Franklin led a British Naval expedition into Lancaster Sound, and, after being stopped by ice in Barrow Strait, wintered at Beechey Island, the southwestern corner of Devon Island. The next year he continued westward and was lost, never to be seen again. Despite the fact that sixteen rescue expeditions entered the Arctic from both the east and west, discovered 6,000 miles of new coastline in their search, and covered about 40,000 miles by winter sledge trips, Franklin's fate remained a mystery until M'Clintock brought out some

^{*}Article prepared at the Bureau of Northwest Territories and Yukon Affairs, Lands, Parks and Forests Branch, Department of Mines and Resources, Ottawa—based on interviews with and reports from Staff-Sergeant (now Sub-Inspector) Henry A. Larsen of the Royal Canadian Mounted Police, and published by permission of the Commissioner, Royal Canadian Mounted Police.

^{**}Geographer at the Bureau of Northwest Territories and Yukon Affairs, Ottawa

clues in 1859. This extensive search well illustrated the vastness of the Canadian Arctic. Many famous explorers, whose names are now commemorated on our maps, travelled widely by small boat in summer and by sledge in winter, and their mapping brought forth the first definite outlines of the Arctic Islands. All their accounts lay stress on the short navigation season after the land-fast ice breaks up, on being obstructed by extensive masses of pack-ice moving eastward from the Arctic Ocean through the many channels of the Arctic Islands to Baffin Bay and the North Atlantic, and on an early freeze-up followed by a severe winter, with sledges as the only means of travel.

In 1854 the long-sought Northwest Passage was finally traversed by Captain M'Clure and part of his crew. They abandoned their ice-bound ship north of Banks Island in 1853 and sledged eastward to meet Captain Kellett at Dealey Island. The next spring M'Clure sledged to Beechey Island and was brought out from there by ship. When the news that the difficult route had been found was combined with geographic information which was reported on ice and navigation conditions by the many expeditions, enthusiasm for the Northwest Passage declined among explorers. In the meantime, commerce now knew safer and more dependable routes to carry the world's merchandise, and no longer encouraged interest in the Passage.

The Northwest Passage, which had brought so many ships to destruction in the ice during three long and arduous centuries of polar exploration, remained unconquered by any one vessel until the beginning of the present century. In 1903, Roald Amundsen, Norwegian Arctic adventurer, entered Lancaster Sound in a small 47-ton vessel, the *Gjoa*, and took a route southward into uncharted Peel Sound, between Somerset and Prince of Wales Islands. He navigated as far as southeastern King William Island, where his party spent two winters at Gjoa Haven (Petersen Bay), studying terrestrial magnetism near the North Magnetic Pole on west-

ern Boothia Peninsula. In leaving the Arctic, Amundsen sailed westward through Queen Maud and Coronation Gulfs but was caught in the ice near Herschel Island, where he passed his third winter in 1906. Next summer he and his crew continued westward, becoming the first persons to navigate the Northwest Passage successfully from east to west in a single ship.

pl

di

liv

ac

SI

fre

Fe

at

W

fre

m

tic

fe

hi

tu

Li

ta

th

wi

in

dia

Within the modern period the Hudson's Bay Company has experimented with the use of the northern route to bring supplies to its far-flung northern trading posts. In 1928 the H.B.C. schooner Fort James, drawing 9 feet of water, entered the Western Arctic from the east through Lancaster Sound and Peel Strait and brought supplies to the Gjoa Haven trading post on King William Island. After spending two winters there, the Fort James returned to the Eastern Arctic via the same route. This was the first commercial use of part of the passage, but when the Fort James was sent to the Western Arctic in 1934, she travelled via the Panama Canal.

In 1937 the Hudson's Bay Company icebreaker Nascopie, carrying the Canadian Government Eastern Arctic Patrol, opened the trading post of Fort Ross at the eastern end of Bellot Strait, and here met and exchanged freight with the small H.B.C. schooner Aklavik, which came up from King William Island. Thus Bellot Strait, which had five times defied Captain M'Clintock and his Fox in 1858-59, became the meetingplace between the Eastern and Western Arctic on the Northwest Passage. Shallow seas along the western section of this route, however, limited the size of boats to small schooners like the Aklavik, causing the route to be of little economic value, and the scheme was dropped in 1940.

The boat which was to make history in the Northwest Passage, the R.C.M.P. schooner St. Roch, was built in 1928 and entered the Western Arctic around the Alaskan coast. In the following years the 80-ton, two-masted vessel travelled along the Western Arctic coasts and islands as a "floating police detachment", carrying sup-

plies and doing routine patrol work without fanfare, through the same difficult ice conditions which had cost so many ships and lives among the early explorers. These hardy adventurers were able to brave only one or two winters in the Arctic, but the sturdy St. Roch has spent ten of her sixteen years frozen into the ice of some Arctic harbour. Four successive winters, 1930-34, were spent at Tree River, in Coronation Gulf, and three winters, 1935-37 and 1938-39, were passed frozen in at Cambridge Bay. Aided by modern equipment and radio communication, the R.C.M.P. boat has been performing feats of Arctic ice navigation equal to those history-making voyages of less than a century ago. But to Staff-Sergeant Henry A. Larsen, who has been the unassuming Captain of the schooner during all of these years, this difficult work of navigation and long winter dog-sled patrols are the usual routine in maintaining law and order in the Canadian North.

On June 23, 1940, the St. Roch left Vancouver, British Columbia, beginning the historic voyage which was to make the 80ton schooner the first ship to complete the elusive Northwest Passage from west to east. The voyage northward through the Inside Passage and across the north Pacific to the Aleutians was uneventful. The St. Roch entered Bering Sea through Unimak Pass and anchored at Akutan Harbour to check her engines and fill the fresh-water tanks. The schooner continued to Dutch Harbour in the Aleutians on July 8 to load a supply of fuel oil for the diesel-powered engines. Adverse weather, with strong winds, rain, and fog, was met in crossing Bering Sea and, after stopping at Teller Harbour for a day, the St. Roch passed through Bering Strait in a dense fog and entered the Arctic Ocean on July 17.

On July 23, the St. Roch rounded Point Barrow spit and met the first loose-scattered ice-floes. By evening the blocks had become

Captain and crew of the "St. Roch" at the end of the first historic voyage, 1940-42. Left to right: Const. W. J. Parry, Cook; Const. P. G. Hunt, Deckhand; Const. E. C. Hadley, Wireless Operator; Staff-Sqt. H. A. Larsen, Master; Const. F. S. Farrar, Mate; Const. J. W. Doyle, Deckhand; Cpl. M. F. Foster, Engineer; Const. G. W. Peters, 2nd Engineer





"St. Roch" frozen in and covered over in winter quarters.

more numerous, and the St. Roch began the familiar task of slowly "working the ice"—twisting and turning from one lead to another opening, edging around large floes and pushing aside small blocks, drifting with the pack and waiting for a lead to appear; Larsen and the St. Roch had been doing this patient work in partnership since 1928. Progress was slow and it became apparent that this was going to be a bad year for ice along the northern Alaskan coast.

Ice conditions are unpredictable in the Arctic, and are greatly dependent upon prevailing winds. The polar pack-ice, which moves in a general clockwise direction in the Arctic Ocean, presses southward against the Alaskan coast. In years when prevailing winds are easterly or southerly, the ice is moved westward and leaves an open strip along the coast; but northerly winds will pack the floes against the shore, impeding or blocking passage. Although this northern route was formerly used by whalers, many were lost during bad years, and since 1936

only the H.B.C. schooner Fort Ross, in addition to the St. Roch, has entered the Western Arctic via this route. Small schooners have more success along the Alaskan coast because they can travel close to shore inside of the ice which grounds in the shallow coastal water. The only large ship to attempt this route, the H.B.C. icebreaker Baychimo, after a few successful trips was caught in the ice off Point Barrow in September, 1931, and abandoned.

For eighteen days the St. Roch struggled in the pack-ice, east of Point Barrow. During much of this time the schooner had to be continually tied up to large floes for protection, and movement was mainly concerned with preventing the ship from being crushed. The weather was constantly foggy, further curtailing chances to see leads. At one time the St. Roch was able to anchor close to shore near Beechey Point, but as the ice began to close in again Larsen had to put the schooner back into the pack to avoid being shoved ashore. It was then moored to





Above: Loading a basket-sled for winter patrol to Eskimo camps.

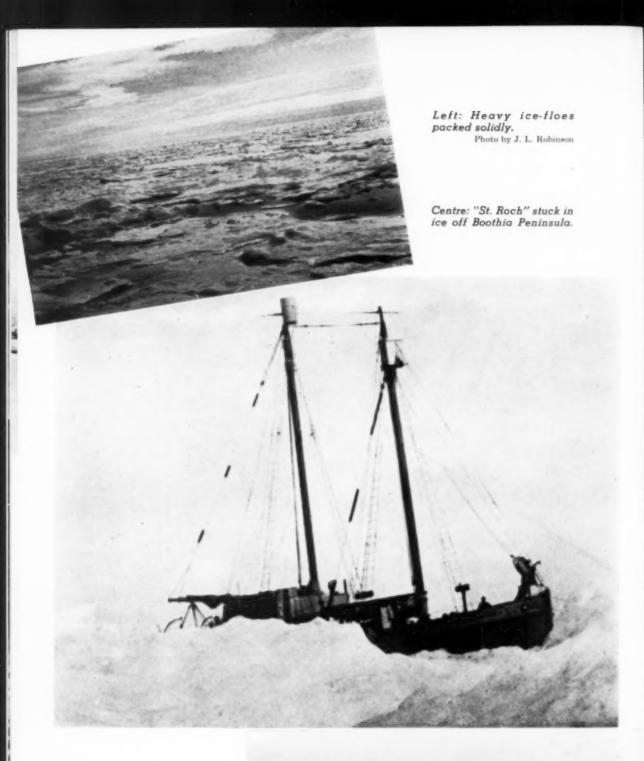
Top right: Const. Peters and Eskimo guide encamped on Prince of Wales Strait.

Centre: Native boy with dog-team hitched in Western Arctic style.

Below: Snow-houses in Eskimo winter camp







Right: Heavy ice loosely packed.
Photo by J. L. Robinson



a grounded floe for two days so as not to lose distance by being pushed westward during a furious northeasterly gale. On August 2 the police vessel resumed working eastward and reached Cross Island before being caught once more. Northwest winds jammed the ice against the shore and pressed hard against the boat, so that on August 10 Larsen had to start blasting the ice in order to work free. After each blast the schooner charged into the opening and finally reached open water near shore. Thereafter good progress was made eastward, although the vessel scraped bottom several times. Barter Island was passed on the morning of August 11, and very little ice was encountered between there and Herschel Island.

After loading coal and other supplies, the St. Roch left Herschel Island on August 18 and crossed Mackenzie Bay to Port Brabant (Tuktoyaktuk or Tuk-tuk). From this harbour the police schooner continued her normal routine patrol work of carrying supplies to the various R.C.M.P. detachments in the Western Arctic. Bad weather, fog and strong winds caused several delays in the eastward trip to Coppermine and Cambridge Bay, and it was not until September 16 that the schooner returned to Coppermine with her freighting duties finished.

Captain Larsen had originally hoped to proceed through the Northwest Passage via Prince of Wales Strait between Victoria and Banks Islands after completing the freighting work, but the delays caused by ice and bad weather discouraged any such attempt so late in the season. A decision was then made to winter either on Banks Island or at Walker Bay on central west Victoria Island, and to be ready to navigate the Passage early the next summer. The St. Roch, therefore, left Coppermine on September 19 and went to Holman Island and thence to DeSalis Bay, Banks Island.

September 25 was spent in examining the enormous harbour and surrounding country at DeSalis Bay, but when Larsen noted high ridges of rock and gravel pushed up along the shore, indicating heavy ice pressure during break-up in the spring, he considered it

unwise to winter here. Since no other good harbours were known in the area, the St. Roch sailed for Walker Bay, where the explorer, Collinson, had wintered in 1851-52. The vessel had a total of 5,240 miles to show for a season's work when she was anchored in the southeastern part of this bay.

A continuous strong east wind blew during most of October and prevented Walker Bay from freezing over until October 30. It was the latest freeze-up known in this area, and, if Larsen had had any way of knowing that it was to be so delayed that year, it is possible that he might have been able to make his way immediately through the Passage to the Eastern Arctic. The vagaries of Arctic weather are unpredictable, however, and what is done in one year may not be possible in another. After the schooner was frozen in, a framework was constructed and the deck was completely housed over with canvas.

During the winter of 1940-41 the St. Roch detachment made several normal patrols through the area, visiting native camps to investigate Eskimo conditions and welfare, registering vital statistics and firearms, and generally carrying out the many other duties of the R.C.M.P. in supervising this vast Arctic region. As is customary, travel was by Eskimo dog-team and sled, and the nightly shelter was a snow-house of their own construction. Short patrols totalling 990 miles were made to Holman Island for mail, to Minto Inlet, to Prince of Wales Strait and inland on Victoria Island. One especially long patrol of 41 days, covering about 600 miles, was made for the purpose of visiting the prosperous Eskimo camps on the western side of Banks Island.

During the spring, when days became longer, the vessel and equipment were scraped and painted and all machinery was examined and overhauled. The ice in the harbour began to break up in July, but westerly winds kept Walker Bay blocked with floes for some time. On July 31, Larsen decided to try to work his way out, and, after much manoeuvring, finally reached the trading post and mission at Holman Island.



Natives from Thom Bay, Boothia Peninsula, in workaday clothes

Here duty intervened, preventing the schooner from attempting the Passage through Prince of Wales Strait. A native boy had been accidently shot and needed to be taken to hospital at Aklavik. Large and numerous ice-floes, foggy weather, and a storm off the mainland coast made progress slow, and the harbour at Port Brabant was not reached until August 5. Whereas

Amundsen Gulf had been free of ice until very late in the preceding year, during the summer of 1941 floes jammed the northern part of it throughout the whole season. Thus does the natural environment limit planning in the Western Arctic.

Supplies were loaded into the St. Roch at Port Brabant on August 8, and the vessel left for Coppermine to fulfil her freighting duties. Scattered ice, rain and fog made travel to Baillie Island difficult, while large unbroken floes extending eastward to the horizon forced the schooner to travel along the shallow shores. Open water was finally reached in Dolphin and Union Strait, and the vessel arrived at Coppermine on August 12. Coronation Gulf favoured the St. Roch with good weather and open water, and she anchored in Cambridge Bay early on August 16.

Since the detachments had now been given their year's supplies, Larsen decided to continue eastward and attempt the Passage around King William Island and through Bellot Strait. On August 19 he left Cambridge Bay, but strong westerly winds, rain and fog were ill omens. Larsen was forced to anchor in the shelter of Lind Island and was held there until August 24. The compass



Winter quarters of "St. Roch" at Pasley Bay, Boothia Peninsula



Native women of Bathurst Inlet in holiday attire

was now useless, owing to the proximity of the Magnetic Pole, and navigation through island-studded Queen Maud Gulf was by experience and seaman's 'sixth sense'. The St. Roch proceeded cautiously towards Simpson Strait, south of King William Island, taking soundings continually, since no vessel of her draught (13 feet) had ever been in these waters. Because Simpson Strait is narrow and full of small rocky islands, Larsen sent the motor launch ahead to sound a course. The bottom was uneven, with depths averaging from 6 to 8 fathoms, and with several shallow places of 3 fathoms. On August 26 the vessel remained at anchor during a thick fog. The next day she proceeded carefully and reached Gjoa Haven (Petersen Bay) in the afternoon.

The sea-faring policemen left this trading post on August 30 and were soon inching their way through shoal water and strong tide rips in Rae Strait. A northwesterly storm, accompanied by hail and snow, forced the schooner to the coast in the shelter of Mt. Matheson, on the eastern tip of King William Island. Here she pitched and rolled for a day before proceeding northward, with one man continuously sounding with the lead and another at the masthead on the

lookout for shoals. East of Matty Island large shoals, which rose abruptly from 10 to 2½ fathoms, forced the schooner to seek deeper water.

In the narrowest part of James Ross Strait, northeast of Matty Island, the St. Roch was stopped by a solid wall of grounded ice extending from shore to shore. Since the vessel was not built or powered to break such



Staff-Sqt. H. A. Larsen on the trail—visiting Eskimo camps.

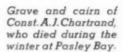
a barrier, she was anchored near by to wait for the tide to change direction. Early in the evening the ice began pushing southward in a strong current. The only shelter available was in the lee of a small rocky islet only slightly larger than the schooner herself. A snow-storm shut off visibility, and throughout the night the St. Roch, with both anchors out, was continually battered and pushed by grinding ice blocks, and the little company on board did not know whether they were still near the islet or were caught in the ice. The morning of September 2, however, found them still there and undamaged, and when a south wind began pushing the ice northward they moved along with it.

On September 3, improved weather allowed the St. Roch to proceed northward between the coast and the ice. The low land was now snow-covered, and when visibility became poor the white shore could not be distinguished from the grounded ice. During the day the wind changed to the west, gradually moving the ice closer to the coast. It became apparent that there was a definite danger of being caught and crushed. Fortune was with the valiant ship, however, for Pasley Bay, a long inlet, erroneously shown on the charts as a broad bay, appeared ahead, and the St. Roch was forced into it.

The next morning its crew made a trip to a near-by hill to look westward over the ice of Franklin Strait and M'Clintock Channel. It was jammed against the coast as far as could be seen, and extended in a jumbled mass to the horizon. In the afternoon large floes began to shove into the inlet, and the St. Roch had to move farther in. Soon the ship was completely surrounded by heavy ice and could no longer manoeuvre. On the morning of September 6 the ice carried the vessel against a shoal in 1½ fathoms, turned the schooner twice, listed it to alternate sides, and then pushed it completely over the shoal, dragging two anchors and 90 fathoms of chain.

Heavy snowfall and variable winds continued, and the St. Roch remained locked in the ice until September 9, when deep water was found in an opening close to the shore. On September 11 the ice movement ceased. New ice soon formed rapidly in the open places, and the whole inlet froze over solidly. As it was now impossible to escape, the ice was cut away from the ship, which was anchored farther off-shore so as not to be grounded in the spring. Preparations were then made to spend the winter in Pasley Bay, close to the North Magnetic Pole on Boothia Peninsula, and the news was radioed outside. The schooner had travelled 1,660 miles during the summer. The season was still early by normal standards, and Bellot Strait and the Northwest Passage were only 100 miles away, but the fickle Arctic had again frowned on the St. Roch.







The stranded R.C.M. Policemen had an important task to perform during the winter of 1941-42. In the taking of the census of the Canadian Arctic areas, their job was to meet as many as possible of the Canadian Eskimo in this little-visited region. In order to do this Larsen travelled by dog-team to the trading post at Fort Ross in early December and obtained information as to the location of the native camp-sites in the area. In early January Constable Chartrand patrolled to King William Island to prepare a fish cache for the long spring census trip, and also to bring back additional winter clothing made by the natives for the detachment. Towards the end of February, Sergeant Larsen and Constable Hunt, having picked up a native guide, left their winter headquarters on the St. Roch for an epic patrol which was to cover

1,140 miles and extend over a period of 71 days. They travelled north to Fort Ross and beyond to Creswell Bay, then southward along the east coast to Boothia Peninsula to the mission at Pelly Bay. After spending Easter there, they travelled westward to Gjoa Haven, King William Island, where both were laid up for fourteen days with influenza. This illness curtailed the patrol, and they returned to the St. Roch on May 6.

The winter weather at Pasley Bay was quite different from any other that Sergeant Larsen had known previously in the Arctic. Continued fog and snow-fall with variable winds made visibility poor, while sudden changes in temperature from 30 below zero to zero and back again within a short time made it difficult to become acclimated. As summer approached it became apparent that the ice was not going to break up early in this region. It was still packed solidly outside the inlet, and pressure ridges, 50 to 100 feet high along the coast north of Pasley Bay, showed the results of enormous ice forces. Since the ice was to remain that year there was virtually no navigation season for the west side of Boothia Peninsula during the years 1941-42.

The St. Roch and police crew spent eleven months at Pasley Bay. On August 4, fresh water draining into the harbour loosened the ice and allowed them to move out of the inlet. On the shore behind they left a new cairn and grave. On February 13, Constable Chartrand had had a sudden heart attack and died almost immediately; his death was the only tragedy of the trip.



"St. Roch" ready to leave Pasley Bay, August, 1942.

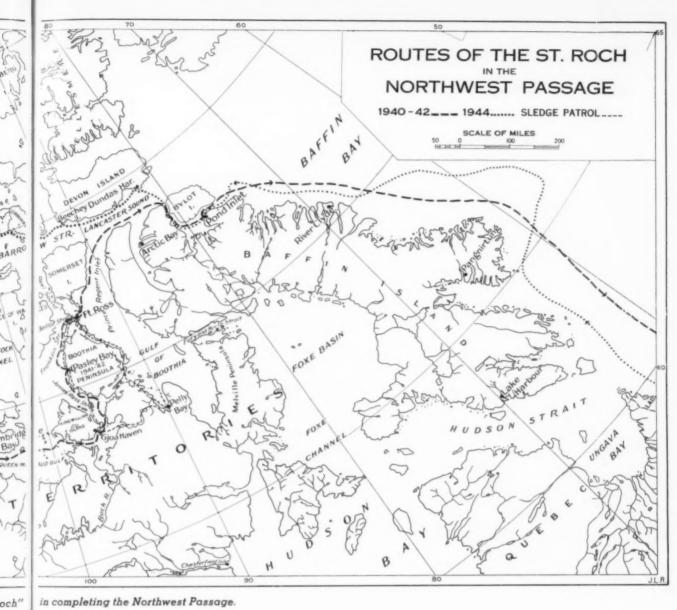


Map of routes taken by "St. Roch"

Captain Larsen navigated shoreward of the main pack-ice and made 15 miles northward along the coast before being stopped by a solid mass of floes. He then put the vessel into a small lead extending westward to await a break-up. The opening closed, however, and the schooner was caught and held there helpless for twenty days. On several occasions, while they were beset, severe pressure lifted the boat high in the ice and threatened to turn her over. At these times charges of black powder were set off near the vessel to relieve the pressure, while

the police crew worked with ice-chisels to keep free the propeller and rudder. An easterly wind carried the schooner farther and farther away from the coast.

On August 24 a strong northerly gale split the ice and opened a long lead south from one of the rocky Tasmania Islands. It took two anxious days for the St. Roch to break through the short distance to the lead and then to follow the twisting, grinding opening to the safety of a deep anchorage among this small group of high islands. A strong current set back and forth through the islands, with



in completing the Northwest Passage.

the regular 5-foot tide, and on August 29 Larsen decided that the leads looked promising. They worked northward to Dixon Island and then found easier going to Bellot Strait.

With the Northwest Passage practically in their grasp, tragedy almost struck the St. Roch and crew in Bellot Strait. The western end of the strait was free of ice, but the tide was changing direction to the eastward as the vessel entered. The ice from Peel Sound was carried in behind them. Half-way through the strait, Larsen suddenly saw that an ice-jam had formed ahead

from shore to shore. They could not turn back and were headed for a large, thick, grounded floe. Then, just as they were about to crash and be wrecked, a smaller floe hit the larger one and broke off its southern half. The next moment the St. Roch's prow went into the widening crack and she drifted forward between the two floes.

The St. Roch left Fort Ross on September 2, surrounded by moving floes, and worked north in Prince Regent Inlet, with young slush ice already forming. The Nascopie, on the Eastern Arctic Patrol, was to have entered this inlet later in the month, but although she had reached Fort Ross successfully for five previous years, she was stopped this time by the ice which was already threatening the St. Roch. The hurrying schooner entered Navy Board Inlet and stopped at the Pond Inlet post on Northern Baffin Island to discharge stores and coal for the police detachment and to pick up Constable Doyle. On September 10 it left this Eastern Arctic post and travelled through numerous bergs and storms southward along the Baffin Island and Labrador coasts.

After stopping at Labrador, Newfoundland and Sydney, Nova Scotia, the St. Roch and crew arrived in Halifax on October 11, having travelled 2,840 miles en route during their third summer season. The historic news that the St. Roch was the first ship to complete the west-to-east voyage through the Northwest Passage in Northern Canada was then released. The trip of 27½ months bettered Amundsen's time, and, with improved weather and ice conditions, it might

well have been less. To Staff-Sergeant Henry A. Larsen this historic feat was an achievement of which to be proud, but nothing about which to become excited. He and his police crew had been travelling around amid the ice-floes of the Western Arctic in good and bad seasons for fourteen years, and had conquered the Passage as a side-activity while successfully carrying on with their other police duties. Larsen discounted his long winter patrols by Eskimo dog-team and sled as something which the R.C.M. Police are doing every winter throughout the Arctic in keeping contact with our migratory Eskimo population.

During the 1943 navigation season the St. Roch had a change of scenery while patrolling the Eastern Arctic detachments. She entered Hudson Strait after most of the ice had gone, and had little trouble in sailing around in this new region with no ice impediment except the huge bergs met off the eastern Baffin Island coast. The Eastern Arctic, however, is not always so friendly.

During the spring of 1944 the St. Roch was provided with greater engine-power, one mast was removed, and she was fitted with the luxury of a new gyro-compass. The R.C.M.P. were going to patrol another route through the Arctic Islands as part of Canada's work in maintaining sovereignty over these barren, uninhabited islands, and the partnership of Larsen and the St. Roch was scheduled for another history-making voyage.

On July 22, 1944, the St. Roch left Halifax, but developed engine trouble which forced her to put in to Sydney. She left there on July 26, but had to moor again at Curling Cove, Newfoundland, to make further engine adjustments. On July 28, she put to sea once more, and thereafter had no further engine difficulties. Numerous bergs and thick fog were found off the Labrador coast, but Larsen navigated around icebergs just as efficiently as he worked through floes. Cape Chidley, the northern tip of Labrador, was passed on August 2, and the next day the patrol was greeted with the familiar sight of pack-ice off Hall Peninsula, Baffin



"St. Roch" in dry-dock at Halifax, N.S. Her wooden hull is undamaged despite two years in the ice. Note the steel plates on the prow. Island. The ice was broken, but tightly packed, and progress was impossible, so Larsen swung over to the usual open water off the Greenland coast on August 4. On August 6 he turned westward towards Baffin Island, and again met pack-ice and fog slightly south of River Clyde. For several days the gyro-compass had been unreliable, and would suddenly change 10 to 20 degrees; finally it had to be ignored as useless. Larsen's navigation from then onward was by sight, experience and the wavering magnetic compass.

In trying to work through the ice to travel near the coast off River Clyde, Larsen found that the land-fast ice had not yet broken up and he had to stay offshore. His difficulties were further increased by an amazingly strong mirage effect which made the leads difficult to pick out. Progress was stopped on August 9 by floes that were very large and unbroken, although only about 2 feet thick. Bylot Island was glimpsed through a thick fog that evening, but the *St. Roch* remained moored to a large floe off the entrance to Pond Inlet until August 12, when she slipped forward and anchored off the post settlement.

Detachment supplies were unloaded at Pond Inlet, and the police picked up a native, his family and seventeen dogs. The Eskimo was quite willing to adventure into the unknown, and so, in case the St. Roch should be forced to winter, he was taken along to hunt food and aid in winter travelling with his dog-team. The expedition left





Picturesque Pangnirtung fiord, the last stop of "St. Roch" on her 1943 patrol
Photo by P. D. Baird

Pond Inlet on August 17 and, proceeding up Navy Board Inlet, crossed Lancaster Sound to Devon Island. A strong southerly gale off Cape Warrenden caused the *St. Roch* to pitch a great deal before shelter was found in the lee of a large flat-topped iceberg. There it cruised back and forth until the storm subsided.

The St. Roch arrived at the former R.C.M.P. post at Dundas Harbour, Devon Island, on August 18, and found the unoccupied buildings in good condition. The patrolling schooner and police crew left the next day and followed along the high, cliffy coast until they came to a good harbour in a little-known 7-mile inlet (either Stratton Inlet or Burnett Creek). Here they found ruins of an Eskimo culture of several centuries ago; after building a cairn and depositing records of their visit, they departed. That evening (August 19) the first snow fell, heralding the coming winter.

Larsen and the St. Roch continued westward, but the coastline was usually hidden by frequent heavy snow-squalls. The weather cleared near Maxwell Bay, Devon Island, and they saw a steep-walled coast with no beach and a flat-topped upland. A few bergs could be seen to the south, but otherwise

The twisting inlet at Lake Harbour; "St. Roch" called here in 1943

Photo by J. L. Robinson



Captain and crew of "St. Roch" before the record-making 1944 voyage.

Front row, left to right: Const. James Diplock, Huntsville, Ont.; Cpl. G. W. Peters,* Winnipeg, Man., Cpl. P. C. Hunt,* Victoria, B.C.; R. Johnson, Vancouver, B.C.; Staff-Sgt. H. A. Larsen,* Victoria, B.C.

Back row, left to right: Const. M. G. Owens, Winnipeg; G. Dickens, Chatham, N.B.; Frank Mathews, Fort Abass, Nfld.; Wm. Caslin, Dartmouth, N.S.; Ollie Andreasen, Victoria Landing.

*Peters, Hunt and Larsen made first trip, 1940-42.

Prince Regent Inlet was free of ice. On August 20, they arrived at historic Erebus Bay, Beechev Island.

Beechey Island is actually connected to Devon Island by a low spit which is dry at low tide. A narrow lowland at the base of the former high cliffed 'island' was the site of the winter quarters of several early Arctic explorers. Within recent times the site had been visited by one of Otto Sverdrup's sledge

parties in 1902, by A. P. Low in 1904, by Captain Bernier in 1906 and 1908, and by the C.G.S. Arctic in 1923. Numerous police patrols from Dundas Harbour, and also the Beothic, carrying the Canadian Government Eastern Arctic Patrol in 1927 and 1928, called there to keep a watchful eye on the historic ruins. Except for part of the keel and a bit of planking, all that was left of the yacht Mary, placed there in 1853 by Sir John Ross, was the mast, which was stuck in the sand. Only ruins remained of the cache called Northumberland House, left by Commander Pullen of the H.M.S. North Star in 1854. A further search of the island revealed nothing of historic interest. Since the land was barren and desolate, with no fresh-water supply, the St. Roch proceeded from Beechey Island on the morning of August 22.

Wellington Channel was clear of ice as far as could be seen to the northward, but the first floes were met drifting eastward at Cornwallis Island. Larsen followed leads through the tightly-packed floes, staying inside of the line of Griffith, Somerville and Brown Islands, along the Cornwallis Island coast. Several walrus were seen in this area, and four were shot and brought on board to



Passing glaciers and ice-cap along Baffin Island coast of Navy Board Inlet. Photo by P. D. Baird

be used as dog-feed. At other times, along the way, seals were shot to feed the team of hungry Eskimo dogs. Since the ice was packed solidly to the south, Larsen turned north along Cornwallis Island as far as Cape Airy, where he found leads pointing westward towards Bathurst Island, the south shore of which was obscured by a heavy snow-storm. Despite being turned and buffetted by the ice, the St. Roch maintained a forward course, and Cape Cockburn was reached about noon on August 23. Here solidly-packed floes blocked further progress. The tide set to the east, and the St. Roch was carried 20 miles back to Ackland Bay before anchoring close to shore. Larsen's difficulties were further increased by the failure of his magnetic compass, which had pointed fixedly at the bow of the schooner for several days. For the remainder of the voyage he had only his Admiralty charts and an amazing sense of direction upon which to depend as navigation aids. Even the sun was hidden by continuous snowstorms.

Early in the morning of August 24 the St. Roch once more slipped along the coast to Cape Cockburn and anchored, while a party went ashore to look for Captain Bernier's cairn. No trace of the cairn could be found, but numerous bear tracks in the area suggested that these curious animals might have scattered it. Larsen left an R.C.M.P. cairn near a conspicuous rock on the south side of the point and placed a record of their visit inside it for historical reference. From this high cape it could be seen that Viscount



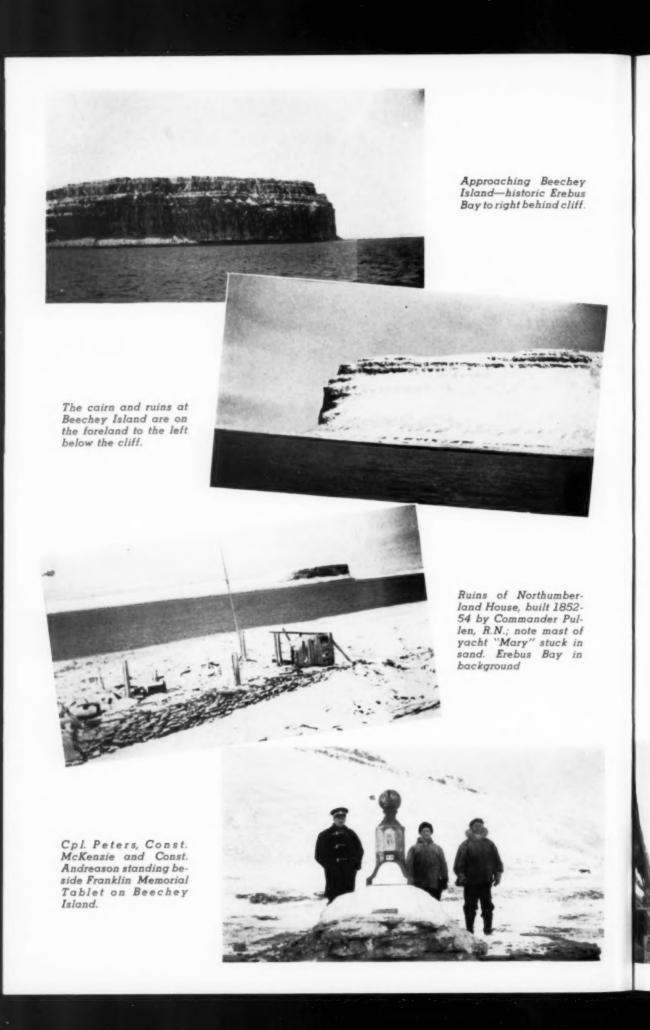
Travelling up Navy Board Inlet after leaving Pond Inlet, N. Baffin Island. Photo by P. D. Baird

Melville Sound was filled with ice to the horizon. The ice was broken but tightlypacked, and was pushed against the islands by a strong south wind. Ice was also being carried southward by currents through Austin Channel, west of Bathurst Island.

Since he could not proceed westward, Larsen decided to try a route north of Byam Martin Island. He experienced a great deal of trouble near Graham Moore Bay on western Bathurst Island, due to the St. Roch drifting southward with the current each time she was stopped by the ice. After patiently working back and forth from one small opening to another, shoving the floes when possible, or letting them drift by, the St. Roch made the north coast of Byam Martin Island on the afternoon of August 25. Here Corporal Hunt and a party went



Cape Bounty, Melville Island, on the 110th meridian. The British Admiralty offered a reward of £5,000 for the first passing of this point.



Cape Cockburn, Bathurst Island, looking northward (snow-covered in mid-August).

ashore to build a cairn and leave a record of the patrol. Because of a heavy snow-fall, no observation of the surrounding land could be made, but fresh caribou tracks were seen.

August 26 began with clear weather and a fresh westerly wind. After rounding the northern tip of Byam Martin Island, the expedition found open water to the westward. Melville Island was soon sighted, near Consett Head, and the men saw a herd of twelve musk-oxen grazing on the grassy lowland. Other herds of musk-oxen were seen on the tundra farther south, proving that these protected animals, part of the remnant of the species, had survived on their isolated sanctuary. Except for a long patrol by the late Inspector Ernest Joy of the R.C.M.P. to the island in 1929, no white man has visited Melville Island since Stefansson's party in 1917.

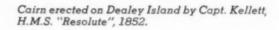
South of Griffith Point, Melville Island, where a cairn was built, the St. Roch was forced to travel slowly, due to shoal water of 4 to 8 fathoms for 2 miles off the coast. At midnight the expedition anchored off

Palmer Point, with still no ice in sight, and another record was deposited. An excellent harbour north of the point was examined the following morning, when thick weather discouraged further sailing. At noon on August 27 the weather cleared, and they approached Dealey Island, where the huge cairn, topped by three barrels on a post, could be seen for miles at sea. The party went ashore and examined the large cache left by Captain Kellett of the H.M.S. Resolute in 1852-53. The walls of the cache were still standing, but there was no roof and most of the contents had been destroyed by the weather and marauding bears. The skeletons of two bears found near by suggested that they might have been poisoned by consuming some of the spoiled food. Some of the barrels contained clothing, sea-boots, flour, chocolate, peas, beans, and tea; all were in a soggy, rotten condition. Some of the iron cans and tanks contained hard-tack and canned meats and vegetables, but most of them had been broken into and the contents had spoiled. On the beach close by the men found two broken rifles and a case of ammunition left by Captain Bernier in 1909.

They left Dealey Island on the morning of August 28, and travelled along the low coast to Winter Harbour, about 30 miles to the southwest. Winter Harbour was chosen by Captain Bernier as the winter quarters for his Canadian Government Expedition of 1908-09, and was visited again by him in 1910. The storehouse built by Bernier in 1910 was still in fair condition, although almost empty, and from a rafter hung a bottle containing the record left by Inspector



Approaching Dealey Island, off southern Melville Island; note seaman sounding with lead.





Joy who had last patrolled there in 1929. Numerous tracks of musk-oxen, caribou and wolves were noted around the harbour, but only one old bull musk-ox was seen.

After depositing a record at Parry Rock, Larsen and his crew left Winter Harbour on August 30 and had a clear run 30 miles to the south before meeting heavy ice. Due to mist and rain, they moored to a large floe to await visibility and replenished their fresh-water tanks from pools on the ice. Early the following morning they began working their way through the heaviest ice yet encountered, as it pushed eastward from the Arctic Ocean through M'Clure Strait.

Large cache built by Capt. Kellett, 1852, to hold supplies for future expeditions; note empty tins left by Kellett's expedition.



Several times heavy fog, which obscured leads, prevented progress, and they were gripped by the general counter-clockwise revolving motion of the churning, growling ice. Soundings of 50 and 63 fathoms were obtained during the crossing of the strait. They drifted throughout September 1, but towards evening of September 2, after they had worked forward again, the fog lifted and a cape loomed ahead. Larsen did not know which coast of Prince of Wales Strait the cape marked, but decided to turn eastward. The cape proved to be Peel Point, and he soon realized that he was in Richard Collinson Inlet. Since there was much ice in the inlet and more pouring in behind the boat, Larsen did not consider it wise to explore the inlet to its head, and so turned around and retraced his course to Peel Point.

The St. Roch entered Prince of Wales Strait on September 3 in bright, clear weather. No ice blocked the passage and good time was made to the southward. Holman Island was reached in mid-afternoon of September 4, and the exciting news that the vessel had come through the Northwest Passage was given to the amazed Hudson's Bay Company manager. Although many explorers had spent years in unsuccessfully trying to work through the eastward-moving ice, it had taken Larsen and the St. Roch only eighteen days from the time they entered Lancaster Sound until they were

Inside of Kellett's cache on Dealey Island—most of contents now destroyed.



at Holman Island in the Western Arctic.

Larsen received instructions from Ottawa to proceed outside to Vancouver and to complete the coast-to-coast voyage if he could. After he left Holman Island on September 5, heavy ice gave difficulty all across Amundsen Gulf and forced the St. Roch to proceed slowly close to the shallow shore of the Canadian mainland west of Cape Parry. On September 8 she was freed of the ice off the harbour at Port Brabant, but ran aground trying to enter it in the dark. Larsen backed her off and was able to get in just in time to ride out the worst storm ever known at this place. Two days later, when the storm abated, the entrance to the harbour was completely changed and Larsen erected new markers. The ice was packed solidly in Mackenzie Bay by the northerly hurricane, and it appeared that the St. Roch would have to winter at Port Brabant. On September 17, however, Larsen decided to attempt the crossing, and, after making slow progress through the heaviest ice seen during the voyage, successfully reached Herschel Island. The Eskimo family and dogs from Pond Inlet were left here, along with a large share of the St. Roch's coal and other supplies.

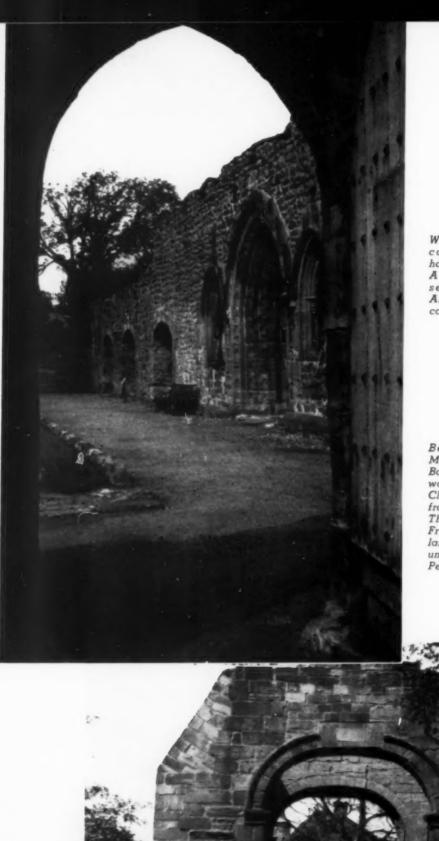
The history-making 'Mounties' left Herschel Island on September 21, as the harbour was beginning to freeze over, and met more heavy ice and fog along the Alaskan coast. With their goal so close, the cruel Arctic weather was teasing them by making their progress more and more difficult, but the St. Roch and her determined crew were not to be denied this time, and their experienced captain countered every aimless movement of the ice. The last of the polar pack was left behind near Wainwright Inlet, Alaska, and the remainder of the voyage became merely a matter of reaching port. Stops were made at King Island in Bering Sea and Akutan Harbour in the Aleutians.

After they left the Aleutian port on October 4, a violent two-day storm and heavy swells on the North Pacific provided but a fitting finish to an exciting historic voyage. Towards evening on October 16, the St. Roch came into Vancouver Harbour with

all flags flying and a large white banner proclaiming the successful trip through the Northwest Passage. Three hundred and sixty-eight years after Martin Frobisher first attempted to enter the Arctic, seeking a northern route, the R.C.M.P. schooner St. Roch became the first ship to complete the Passage in a single year from east to west, with a total elapsed time of 86 days. As Captain Larsen expressed it: "We were lucky and had the breaks. No one can predict ice or navigation conditions in the Arctic. What we accomplished this year might be repeated the next, or it might be many years. Much would depend upon the type of vessel used, and the ice conditions of that particular year. Our voyage showed that the Northwest Passage can be traversed in a single year, but does not prove that this could be accomplished every year."



Arrival in Vancouver, B.C., after successfully traversing the Northwest Passage—for the first time in a single year.



Whalley Abbey, Lancashire—a Cistercian house now partly in ruins. A section, however, still serves as a retreat for Anglican clergy and as a conference centre.

Below:—A fragment of Monk Bretton Priory, near Barnsley. This monastery was built by monks of the Cluniac Order, an offshoot from the Benedictine Order. The parent abbey at Cluny, France, was the finest and largest church in the world until the erection of St. Peter's at Rome.



The Romance of Britain's Abbeys

by ARTHUR GAUNT *

Photographs by the author

As historic treasures and architectural souvenirs, the medieval monastic structures dotted over Britain are of considerable importance. They are tangible links with a notable phase of medieval life in England, and though most of them suffered wanton despoliation at the time of the Dissolution, their architectural beauty can, in many instances, still be easily discerned.

The story of the beginnings and development of such monastic establishments in Britain is itself entertaining. The idea of establishing self-contained Christian communities is almost as old as Christianity itself, the first organized monastic house having been founded near Dendera, in Upper Egypt, during the third century A.D. In Britain, the heydays of the monasteries began during the twelfth century, for many of the existing abbeys and priories were first founded about that time.

A few, such as Whitby Abbey, Yorkshire, are of older origin, but the majority date from about the period just named. Yorkshire, for instance, to-day has more than a score of ruined monastic houses, and nearly all of them are of twelfth-century foundation.

But various religious Orders were responsible for establishing such monasteries, and that is why there are Cistercian, Augustinian, Benedictine, and other categories. Though the general idea of monasticism was to set up self-supporting establishments in which the tenants could devote their whole lives to religious activities, the mode of accomplishing this varied, and the different Orders observed different sets of rules.

Thus, the Cistercians placed great emphasis on manual work, and they carried out big agricultural schemes. Agriculture in Britain owes a lot to the Cistercian monks

who developed farming. They not only cultivated the land in the immediate vicinity of their abbeys but owned properties farther afield. Lay brethren were recruited to work the farms and look after the big herds of sheep.

The Cistercian Order began at Citeaux, near Dijon, France, in 1098, and by 1127 an establishment had been set up in England. This monastic house, Furness Abbey, Lancashire, is to-day one of the finest relics of its type in the country, and the imposing remains vie with those of Fountains Abbey, Rievaulx Abbey, and Byland Abbey, three additional Cistercian establishments founded some years later. Tintern Abbey, Monmouthshire, is another noteworthy example.

At the Dissolution, in 1536-39, no fewer than 86 English Cistercian houses came within the edict and were suppressed. Today, though in ruins, they are still attractive relics, being invariably set amid pleasant rural surroundings. The fact that the Cistercian monks "knew how to choose beautiful sites", indeed, is often remarked upon by visitors to these places.

Actually, the choice was not occasioned primarily by aesthetic ideals, but arose because the rules of the Cistercian Order required the monasteries to be built away from towns. "None of our houses", said the regulations, "is to be built in cities, near castles, or in villages, but in places remote from the conversation of men."

The Cistercians had a connection with the Benedictines or Black Monks, who followed the rule of St. Benedict, the founder of monasticism in Western Europe, for the Cistercian code was a reform of his set of rules. But several purely Benedictine abbeys were set up in England long before the



A peep into the cloisters, Kirkstall Abbey, Airedale. The citizens of Leeds now own this monastic treasure, which was established beside the River Aire by monks who had made an unfruitful effort to found a similar house in Lancashire.

The Orders of canons included the Premonstratensians, the Augustinians, and the Gilbertines. It was originally intended that the Premonstratensian abbeys should be "double" houses, catering for both men and women, but this plan was abandoned. The Augustinians established over 200 abbeys and priories in England; the Gilbertine Order was singular in that, though both men and women were admitted, the men followed the rule of St. Augustine, while the women adhered to the teachings laid down by the Cistercians.

Entertaining stories and legends are associated with the actual erection of the various abbeys founded by these several sects, but a number of fallacies are current regarding the manner in which the edifices were built.

Many of the abbeys were established by benefactors, who provided the necessary lands and funds as thank-offerings for good fortune. In other cases, the sites and money were given in the belief that some crime would thus be atoned.

Cistercians established Furness Abbey. The Benedictines had a religious retreat on the site of the present Westminster Abbey, London, as far back as A.D. 960, for their rules did not preclude the setting up of such houses in cities. Whitby Abbey, on the North Yorkshire coast, was founded by the same Order in the year 657, and was tenanted by both men and women. Glastonbury Abbey, Somersetshire, was founded by the Benedictines in the year 708, and other existing examples are St. Mary's Abbey (York), and Selby Abbey, this last-named still in use as a minster church.

Other abbeys were founded by the canons and friars, though in most cases the members of these particular Orders were not confined to the monastic houses. Those establishments served as headquarters, and the canons served in churches impropriated to their houses. Thus, in addition to owning such abbeys as Egglestone (Teesdale) and Easby (Richmond, Yorkshire), they had outlying houses that served as lodging-houses for the canons during their journeys to distant churches.

The care which was lavished on the decorations of the abbeys can still be discerned from an examination of the ruins; these arches are part of Easby Abbey, in the North Riding of Yorkshire.

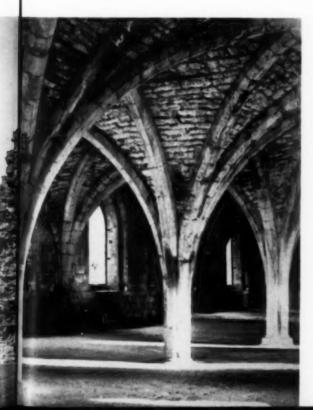


Fountains Abbey, Yorkshire: one of the most famous of the establishments founded by the Cistercians—the Order which did more than any other to develop agriculture in Great Britain.



Kirkstall Abbey, a Cistercian house near Leeds, originated as an act of expiation on behalf of Henri de Laci, a Pontefract baron. Stricken with a serious illness and oppressed by the thoughts of his past misdeeds, he vowed that if he were spared he would atone by providing an abbey.

It happened that, just about this time, a party of Cistercian monks had set out from Fountains Abbey, Yorkshire, to establish a new monastery. They had settled at Barnoldswick, on the Yorkshire-Lancashire border, and had already taken the first steps to found their new abbey, but the site proved unsuitable. When Henri de Laci was recovering from his illness these monks were travelling through Airedale, Yorkshire, in search of a fresh site.

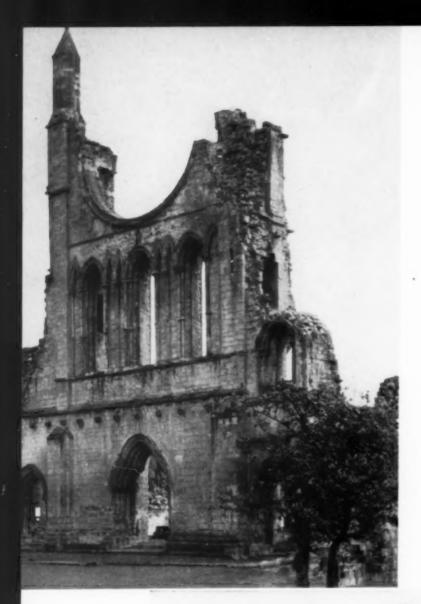


News of their explorations gave the baron the opportunity he sought. Land which he owned at Kirkstall was handed over to the party, and the pioneer monks built a temporary church as a preliminary. Eight years later, Kirkstall Abbey itself was sufficiently developed for the brethren to move in, and the house continued to be extended almost until the time of the Dissolution, 400 years later.

The situation of Byland Abbey, in the Hambledon Hills of Yorkshire, is attributed to a band of wandering monks who had become outcasts from Furness Abbey, Lancashire. For many years these monks travelled through Northern England, transporting all their worldly possessions on an oxdrawn cart. All their efforts to secure patronage and establish a monastery failed, until at last they reached Thirsk and were given temporary lodgings in Thirsk Castle.

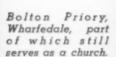
Eventually, the party, consisting of an abbot and twelve monks, were granted a small plot of land at Hood, near Thirsk, but this proved too small for their projected edifice, and the monks moved to Ryedale, a few miles away, where a second site was acquired. But again a snag arose, for the monastery of Rievaulx was already beginning to flourish in that neighbourhood, and the Rievaulx monks complained that the bell of the new abbey disturbed their devotions. So the offenders were compelled to move once more. This time their choice was satisfactory in every way, and work was begun on the Byland Abbey which, though now in ruins, still ranks as a lovely relic.

The many-arched cellarium of Fountains Abbey, Yorkshire. The cellarer, who managed this department, was usually second only to the Abbot. In addition to managing the monastic mills and brew-houses, he had many other important duties, including estate transactions.



The imposing west front of Byland Abbey, in the Hambledon Hills, Yorkshire. This abbey was founded there only after a party of monks had wandered through Northern England for more than 40 years, seeking a suitable site.

Bottom right:—The massive gatehouse of Battle Abbey, Sussex. This monastic establishment was founded by the Conqueror after the Battle of Hastings, as a thank-offering for the success of his invasion.





The romance which the passing years have woven round such monasteries has also created a quite erroneous belief that the structures were actually built by the monks alone. Modern research has shown that, though much of the decorative and other artistic work may have been designed by the ordained brethren, lay brethren and casual labour were widely employed in building the structures.

Artisans from towns and villages converged upon the sites; craftsmen were recruited even from the Continent, and accommodation was provided for these various types of artisans close to the expanding monastery. Furnaces were set up near by for the casting of bells; kilns were built for brickmaking; quarries were opened; and workshops were constructed. But the masons, carpenters, and other labourers were by no means always monks—the monks' job, apart from ecclesiastical decorative work and allied tasks, was chiefly to supervise the lay workmen.

It was afterwards, when the abbeys reached a state approaching completion, that the ordained brethren added their own touch: beautifying the buildings, establishing libraries, and in other ways turning the monasteries into centres of Christian culture.

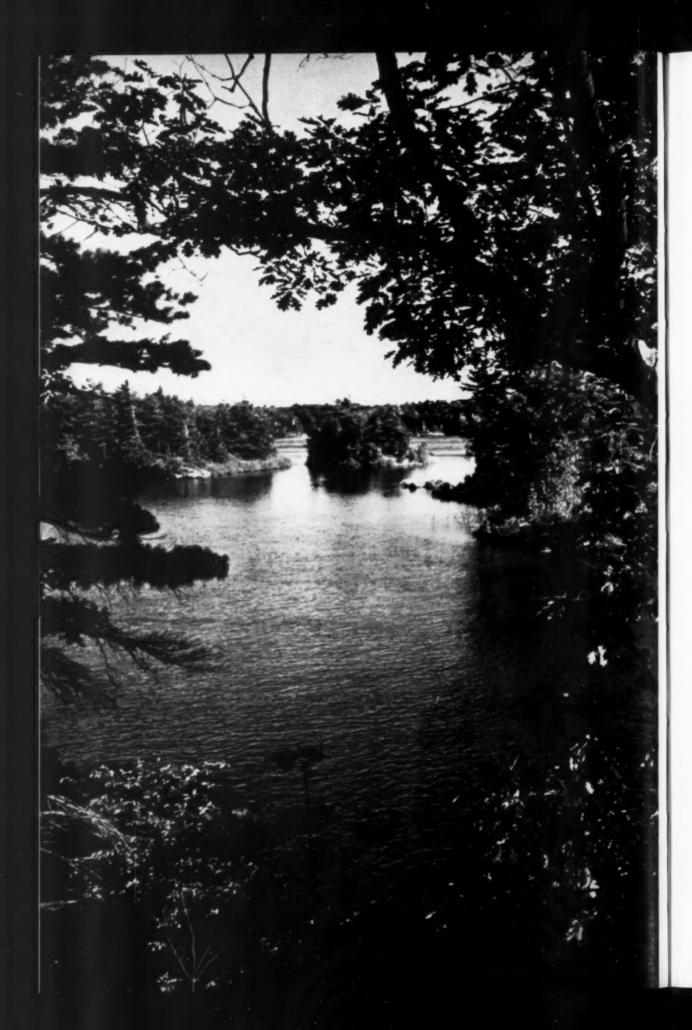
Lay workmen still continued to be employed, however, and special quarters were provided for them in the abbeys. The abbeys also provided lodgings for travellers.

On the other hand, among the ordained brethren were a number who had been skilled workmen before they took their vows of monasticism, and these men were usually put to their old trades while the abbeys were being created. The decorative features executed by real monk craftsmen included the stained-glass windows, and the coloured tiles which formed the mosaic floors of the abbeys. The stained glass no longer exists, but fragments of mosaics can still be seen on the floors of many monastic ruins in Britain. The magnificence of the coloured windows can easily be imagined from a view of such features as the huge circular semi-opening that remains in the partly destroyed west end of Byland Abbey. Filled with coloured glass, this monster window would present a beautiful picture.

In general, the edifices erected by the monastic Orders in Britain are indeed striking and attractive even to-day, though four centuries have passed since the activities carried on there were suppressed. They are also so historic that steps have been taken to preserve them as ruins. Measures have been taken, by both private and public enterprise, to ensure that what is left shall not further succumb.

No national scheme embracing all Britain's abbeys yet exists for their preservation, but a considerable number are looked after by H.M. Office of Works. Others, such as Kirkstall Abbey, are now civic property. Others again are cared for by owners of estates upon which the relics stand to-day, or by the ecclesiastical authorities. Bolton Priory, in Wharfedale, for example, is on the estate of the Duke of Devonshire, and the abbey church is still in use. In Scotland, the Scottish National Trust owns Balmerino Abbey, Fifeshire, and restoration and preservation have been undertaken there under the supervision of H.M. Office of Works.





Ontario's Summer Estates

by E. H. MURRAY*

Ontario's first resources, in the sense of being the first factors which attracted a white population for either permanent or temporary residence, were her forests and furs. It presently became apparent, however, that, with the removal of the forests, fertile land was being uncovered, which could, and did, become the basis of a thriving agricultural industry. These resources, and the servicing of the population engaged in them, were for many years the basis of the chief economic activities within the province.

Then came the discovery that the rocks of the great northern section of Ontario, popularly regarded as waste wilderness, were the hiding-places of mineral wealth of inestimable value. The recovery of that wealth created a great new industry, rivalling the forests and the farms in its contribution to the prosperity of the province and the Dominion. At about the same time, advances in the science of transmitting electrical energy led to the harnessing of Ontario's turbulent rivers, thus supplying power and the amenities of civilized living to city, hamlet, and farm alike.

Then, with increasing wealth and leisure, with transportation facilities until but recently undreamed of, with the broadening of the horizon due to these conditions, Ontario's people began to look about for new means of acquiring the contact with Nature which had been lost in their transition from a frontier population. They found that contact in their numberless lakes and rivers, in the thousands of miles of forests which still remained; and the people of Ontario, as represented by their government, resolved that certain areas should be reserved and maintained forever in their natural condition. Public Relations Branch, Ontario Department of Highways.

The general purpose determining the establishment of both provincial and national parks, large and small, is well expressed by the following official statement, which appears in *The National Parks of Canada:* "Established as outstanding examples of the region in which they are situated, the national parks fulfil a fourfold purpose. They are conserving the primitive beauty of the landscape, maintaining the native wild life of the country under natural conditions, preserving sites memorable in the nation's history, and serving as recreational areas".

Preserved by law for public use for all time, skilfully and efficiently administered by the respective governments, faithfully cared for by trained wardens and rangers, these parks provide more places in which to camp, fish, hike, and indulge in outdoor hobbies than can be explored in the holidays of a lifetime. Several of them also include national monuments and historic sites from which can be studied the country's history in a way as graphic and intriguing as it is different from the old text-book method.

These parks may fittingly be called the 'summer estates' of the people of Ontario. Other provinces have their corresponding gifts from Nature—ranging from the majesty of the Rocky Mountains to the picturesque coves and inlets of Prince Edward Island and Cape Breton—but in Ontario are some of the finest in the Dominion. Take, for example, Algonquin, which is one of the largest and perhaps the best known of all such provincial reservations in Canada. It lies between Georgian Bay and the Ottawa River, just about midway between southern and northern Ontario—and contains about every attraction the northern wilderness



Algonquin Park has many ideal sites for supervised camps.

can offer with the exception of mountains.

Algonquin was set aside in 1893 as a provincial park for the use and enjoyment of the people of Ontario. It is called after an Indian tribe, in order, in the words of the Commission, that "... a once great and powerful people who, in their savage manner, held sway over this territory centuries ago should bequeath their name to a part of it when it is now proposed to maintain it, as nearly as possible, in the condition in which it was when they fished in its waters and hunted and fought in its forests".

Reasons for establishing the park were sixfold: the maintenance of the water supply; the preservation of a primeval forest; the protection of birds, fish, and animals; the provision of a field for experiments in forestry; the creation of a health resort; the retention of the beneficial climatic effects produced by a large forest area. Enumeration of its purposes gives, in itself, a compact description of the park.

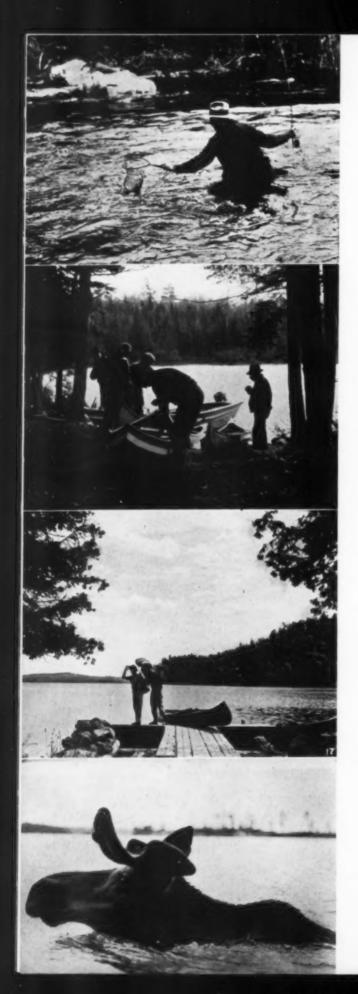
Park areas, if they are to be enjoyed by the

general public, must be accessible. At the same time, control must be exercised over such accessibility so that it may not, in turn, tend to conflict with conservation purposes. The policy of administrative bodies—and this has met with public approval—is to provide accessibility to the borders of the park-lands but to prevent, so far as it is practicable, its extension beyond this point.

Algonquin is reached by a modern highway from Huntsville to Ottawa, which taps its southern extremity, and by two railway lines, one paralleling the highway and the other tapping its western limits. (Also, many of the lakes provide natural landing areas for aircraft.) Once away from these traffic arteries, you enter a natural wonderland of over one and a half million acres where may be taken trophies of the rod or the camera—but not the gun. And what trophies! In every lake and stream the angler will find them in the shape of bass, lake trout, and speckled trout. Naturally, the best catches will be expected in the more remote waters,



Catching the evening breeze in Algonquin Provincial Park.



but a fish hatchery ensures that restocking will be conducted on a systematic basis and that no lake or stream will ever be allowed to become fished-out.

The camera enthusiast has no need to exert himself to obtain his trophies. He will find them all about him-not only endless vistas of forest and lake, but studies of deer, moose and elk, and the lesser denizens of the wild that find sanctuary within the park. Although the park is entirely a wild and natural region, civilization has not been left behind, for, perhaps unobserved, trained rangers constantly patrol its limits, both on foot and by plane, and keep a close check on the movements of all who enter it. The thoughtless visitor who misses his way may be thankful for this check, which will soon locate him. Or he may come upon one of the lumbering outfits operating in the area. When the park was created these established interests were not affected, but they must abide by the regulations: must take precautions against forest fires, must cut timber only in selected spots, and never wantonly, and must not leave slash—principles which any reputable timber operator is glad to observe in his own interests.

The forms of accommodation which can be found in the park are as varied as the means and inclination of the visitor. He can bring his own tent and camping equipment and enjoy a two weeks' holiday for as little as twenty dollars. Or he can find cabins and cottages for sale or rent. And, in spite of the wilderness nature of the park, several modern hotels and a number of lodges provide accommodation for those who desire to

Top to bottom:-

Landing a trout in Snowdrop Rapids, Petawawa River, Algonquin Park.

The portage between Opeongo and Red Rock Lakes, Algonquin Park

Preparing for the portage—Quetico Park.

"Monarch of the Forest"—moose with horns in velvet stage of development

Right:-Sailors all! Mooring the dinghys.

combine the conveniences of civilization with 'the great outdoors'. Numerous wellequipped boys' and girls' camps are also located in Algonquin.

Much more space than is available here would be needed to sketch even an outline of the enjoyable ways in which the visitor may spend his time. One of the most popular is the canoe trip in the maze of lakes and streams which Algonquin makes available for that purpose. Let its highlights be indicated.

The vacationist arises from a refreshing sleep to the symphony of waking birds heralding the approaching day. In the early sunlight he beholds the glassy surface of a lake, perhaps veiled in spots with morning mist. A quick dip, and then to breakfastwhat a taste and aroma the bacon and coffee have here in the open! Dishes are washed, packs loaded into the canoe, and he is off. He follows a course that has been charted and planned to eliminate all unnecessary hardship; often it is the very route the Indian and fur-trader followed long ago. Through a succession of delightful riversthis one a series of tumultuous rapids, the next one with waters subdued by beaver dams-and across the sparkling surface of intervening lakes, he plunges ever deeper into the forest.

At first his arms ache from the thrust of the paddle, but as he becomes accustomed to its rhythmic swing the ache gradually disappears. When the overhead sun and the pangs of hunger tell him it is time for the midday meal, he picks out a suitable spot and builds a fire, taking great care that there

is no risk of its getting out of hand. Here he produces his frying-pan and smoke-blackened kettle and waits impatiently for his food to cook. When the meal is finished, he carefully extinguishes every particle of fire, and then continues his explorations, or perhaps stops to fish. When the sun sinks low on the horizon and shadows creep along the edges of the water, he turns reluctantly ashore in order that camp may be made before dark. With supper finished and everything prepared for another early-morning start, he lights his pipe and, relaxing, watches the pale moon rise out of the trees and cast its silvery light on the dark waters of the lake. Then, as drowsiness creeps over him, he knocks the ashes from his pipe into the water or onto a gravel beach, and lies down to fall into instant sleep in the solitude of the forest.

Such is one of Ontario's summer playgrounds — estates owned and held in the name of all her people.

Let us now look at Quetico Park, Algonquin's counterpart in northwestern Ontario. Like Algonquin, it is a provincial park. Its 1,740 square miles of virgin wilderness lie along the north side of the International Boundary between Fort William and Fort Francis. The description already given of Algonquin largely applies to Quetico, except that it is inaccessible by automobile except from the bordering State of Minnesota. In this respect it differs from the other parks in the province, which in all cases are served by at least one modern highway.

Bottom right:—The "pirate ship"—a novel attraction at one of the boys' camps in Algonquin Park





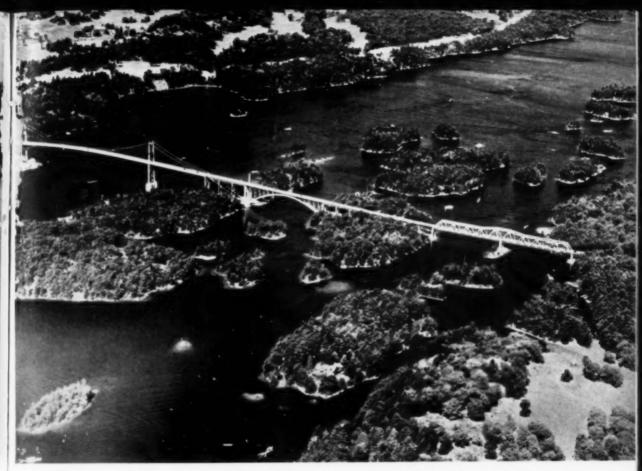


Pleasure craft thread the picturesque channels of the St. Lawrence River.

As a result of this lack of accessibility, Quetico remains unchanged from the days of the fur-traders of three centuries ago, when intrepid voyageurs threaded its waterways in their birch-bark canoes. Nor, if present proposals are carried out, will it ever be otherwise, for consideration is now being given to the creation here of a wilderness international park. It will embrace part of Quetico and the Superior National Forest which lies immediately across the border in the State of Minnesota. In it no commercial enterprises of any description will be permitted. The visitor will have to 'rough it' before he even enters its limits-or rather, we should say, he will have to 'travel light'. No true 'outdoorsman' roughs it. He travels light because he has discovered how many things he can get along without, and he sees no sense in encumbering himself with them.

In Quetico is found the same wild life as in Algonquin, but with more accent on the larger species, such as moose and bear. Here fish (just as game fighters), including the ferocious 'musky', are caught perhaps even more readily than in Algonquin. Here are the same startling panoramas, the same unrivalled scenery, the same deep exhilaration as of the North. To those within its range who seek the great outdoors, Quetico offers an unrivalled choice.

And now, from one public estate along the international border, let us jump almost the length of the province to another, also on the border—to the majestic St. Lawrence River and the picturesque Thousand Islands. This time it is a national park. St. Lawrence Islands National Park consists of thirteen islands in the St. Lawrence River and a section of the mainland between Kingston and Morrisburg, in the land the Indians called *Manitonna*, meaning 'The Garden of the Great Spirit'. Mohawk legend has it that the Great Spirit planted these islands as his



Above:—A bird's-eye view of the Thousand Islands Bridge; the piers seen here rest on Georgina and Constance Park Islands.





The museum at Fort Malden National Historic Park, Amherstburg, Ontario

earthly paradise and then scooped out deep basins of rock from the lower reaches of the river to create treacherous rapids and thus protect his sanctuary from invasion.

But intrepid explorers and hardy settlers conquered the barrier of the rapids, and the river became the first highway into an unknown continent. Along its shores the pioneers erected their crude log forts as bases of supply as they pushed ever westward, and to protect from attack the rude homesteads they hewed from the virgin forests. At Kingston and at Prescott stand Fort Henry and Fort Wellington respectively, erected during the war of 1812-14 to guard the islands. To-day they serve only as peaceful historic sites, symbolic of the river's contribution to the development of a new land, while the islands, formerly the sanctuary of the Great Spirit, now provide a veritable paradise for the enjoyment and rejuvenation of man.

Those who live north of the border and who select the St. Lawrence as the locale for their summer holidays will find it easily accessible by rail or road. The main highway between Windsor and Montreal parallels the river from Kingston eastward. But those who

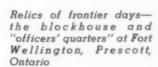
live south of the border will not only be served by modern highways, but will experience an added thrill if they drive up via the Thousand Islands Bridge, the 'skyway route' to Ontario, justly acclaimed the most scenic bridge route on the continent. From the towering height of this international bridge they may look upon a vista comparable to any in the world. Below, and stretching to east and west as far as the eye can see, lie the islands, clustered together like sparkling emeralds cast upon a shimmering carpet of blue, interlaced with winding waterways often hidden from view and discovered only by accident. Some of the islands are mere tiny rock outcrops; others are heavily wooded areas varying from two or three to several hundred acres in extent, crowned with palatial homes such as are found in no other summer playground. Between and around them flows the mighty St. Lawrence, its surface dotted with pleasure craft of all descriptions and frequently ploughed by great freight and passenger steamers. This view in itself is worth the

Imbedded deep along the sands of the St. Lawrence are the footprints of the makers of

Canada: those who called it New France, those who made it British Canada, and those who wished to make it part of the American Republic. In the town of Prescott, Fort Wellington, its guns long since silent, keeps watch over the river, and, perhaps, muses on the events of long ago. The only fortification of importance maintained in a state of preservation between Montreal and Kingston, Fort Wellington, now a national historic park, is a vivid reminder of times gone by when the relationships of the peoples on the opposite sides of this river were less happy than they are to-day. Erected during the war of 1812-14 for the defence of communications between Kingston and Montreal, and named after the Duke of Wellington, it presents an imposing sight with the square wooden cap of its blockhouse topping substantial stone walls. It was never besieged, but its garrison figured in two attacks made on Ogdensburg, directly across the river. The second of these, in 1813, resulted in the capture of that town and the command of the St. Lawrence. During the rebellion of 1837-38, the fort, neglected since 1815, was repaired, and the large blockhouse within the earthworks rebuilt to its present size.

History, often considered dull and dead, can be clothed in living flesh and blood when its scenes are relived in imagination on the very spots where they occurred. So let us glance briefly at another national historic park—Fort Malden, at Amherstburg, on the Detroit River. The site was acquired by the Dominion Government as late as 1937. But its history reaches back into the stirring frontier days when, in 1797-99, following the surrender of Detroit, the British erected Fort Malden, which, for the next forty years, remained their western bulwark. From here, in 1812, went British troops to the capture of Detroit. Following the battle of Lake Erie, the fort was vacated by the British and subsequently occupied by the Americans, who held it until 1815, when it was evacuated and returned to British sovereignty under the provisions of the Treaty of Ghent. Only the earthworks of Fort Malden remain, but close by has been erected a museum in which are to be found many interesting exhibits dating from those early days of struggle for the supremacy of the new world.

By way of variety and, indeed, contrast, let us now examine Point Pelee National Park and Rondeau Provincial Park. These are quite different from any of the parks



11

p

e

d

a

e

a h v f

E

h

f





The broad, sandy beaches of Point Pelee National Park stretch continuously for over thirteen miles.

already described. They are comparatively small in size, but have many miles of sandy beach and a rich growth of trees and shrubs rarely found in such latitudes. Many species of wild birds find sanctuary here, and the parks afford good bases for the excellent black bass and pickerel fishing in Lake Erie.

By Highway No. 3, the direct highway connecting Detroit and Buffalo on the Canadian side, Point Pelee National Park is less than an hour's drive from Detroit or Windsor. A low triangular sand spit, about nine miles long and six miles across at the base, it juts out into Lake Erie to form the southernmost tip of the Canadian mainland. Whether its more than thirteen miles of broad and almost perfect beaches or its luxuriant and varied flora hold greater





Above:—A swimming lesson

Left:—The entrance to Point Pelee National Park



Historic Point-aux-Pins on Lake Erie, Rondeau Provincial Park; note the breakwater on the right to prevent erosion of the beach.

attraction is hard to say. Added to the interest of a trip to Point Pelee is the opportunity to visit the late Jack Miner's famous wild bird sanctuary at Kingsville, only a few miles distant.

Another hour's drive eastward brings us to Rondeau Park, administered by the Ontario Government. It, too, is in the form of a peninsula, but shaped to form an almost land-locked harbour, affording ideal facilities for the use of small water craft between the peninsula and mainland. Although its topography and flora are very similar to those of Pelee, Rondeau might be considered more a residential playground than a park. In addition to a large, well-equipped camping area, here are to be found several hundred privately-owned summer homes, many of which may be rented during the summer season. The park is also equipped with facilities for tennis, archery, shuffle-board and golf, and boasts one of the best dance pavilions in the province.

Another park of the type of Pelee and







TYPICAL EXAMPLES TAR

Above:—Four-lane boulevard stretch on Highway No. 2 between Brockville and Gananoque Below:—Approaching Blindfold Lake on Highway No. 70.





ES TARIO'S FINE HIGHWAYS

Above:—Blue Mountain, near Meaford, on Highway No. 26

Below:—A gravelled section of Highway No. 60 along Cache Lake in Algonquin Park





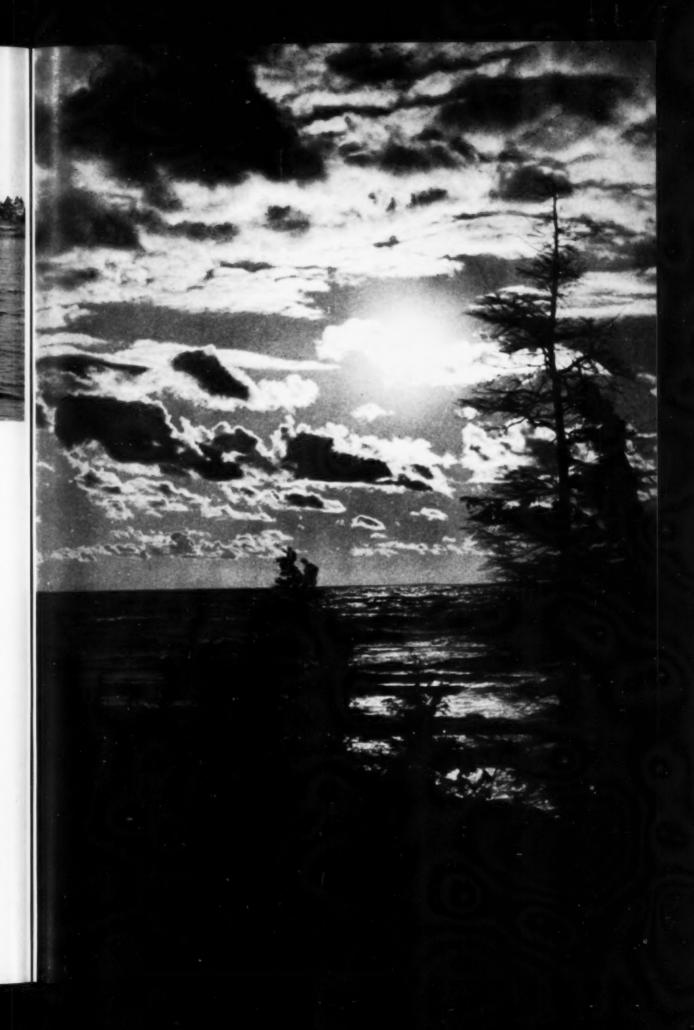
Cruising the island-studded waters of Georgian Bay.

Rondeau is Ipperwash Beach Park on the shore of Lake Huron. It also is administered by the Ontario Government. It lies just off the Blue Water Highway, less than an hour's drive from the border city of Sarnia, and has one of the finest bathing beaches on the Great Lakes. These three parks—Pelee, Rondeau and Ipperwash—are particularly well-adapted to the vacation needs of little children; here they may splash about in the water to their hearts' content in complete

safety, or vary their amusements by building castles in the sand. Too often, in the planning of holidays, little consideration is given to what will or will not appeal to the children. Adult and adolescent may find a locale to their liking for riding, hiking, fishing, boating and swimming in a setting of rolling hills or rugged mountains, forests or open prairie, deep lakes and rushing streams, but these places are not for little children. Fortunately, the Pelee, Rondeau, and Ipperwash



The "flower-pots" (thirty and sixty feet high) on Flowerpot Island; these once formed part of the cliffs on the left.





Lake Superior, as seen from Gros Cap, a few miles north of Sault Ste. Marie—with roadside park and beach in foreground.

Parks, while not lacking in attraction to the adult, are particularly suitable for the summer holidays of the very young.

The last of Ontario's summer estates to be discussed in this article is Georgian Bay Islands National Park—easily accessible by railway and by Highway No. 27 to Midland and Penetanguishene and a short boat trip from these ports. Along the eastern shore of

Georgian Bay lie some 30,000 islands, of which some thirty, at the southern end, have been set aside as a national park. Also included is Flowerpot Island (lying in the mouth of Georgian Bay, off the tip of the Bruce Peninsula), so called because of the rock pillars which, separated from the limestone cliffs by centuries of erosion, stand out boldly on the shore like two immense flower-pots.

Holiday attractions within this park are, perhaps, more abundant and more varied than in any other locality. The myriad rocky islands lie interspersed with devious channels, while, farther out, the storm-tossed waters of the Great Lakes present not only unsurpassed scenery but also excellent fishing opportunities, for here is the home of the small-mouthed black bass.

This district possesses an historic setting which is as stirring and tragic as any in the annals of North American history—a black chronicle of merciless Indian warfare and torture.



Recreational area at Olive Lake, west of Fort William

The whole of this Georgian Bay country is the land that was Huronia, the home of the powerful Huron Indians of a few centuries ago, and the centre of the early Jesuit Missions. Fort Ste. Marie, near Midland, at the foot of the bay, was not just another fort protecting a part of the new world; it was the western bulwark, both military and religious, of New France. When the bloodthirsty Iroquois, mortal enemies of both the Hurons and the French, came sweeping up Lake Ontario to lay waste the land of Huronia, Indian and missionary alike fell before the savage onslaught. Many died at the torture stake; others fled to the islands in the bay, to be pursued and eventually slain by the relentless Iroquois. Fort Ste. Marie was burned to the ground; the destruction of Huronia was complete.

To-day, some of the most scenic islands in the bay have been set aside to be preserved perpetually for the use of the people of Canada and their guests from elsewhere. The location is particularly suitable for young



This roadside park, between Ottawa and Cumberland on Highway No. 17, features an outdoor fireplace.

people's camps, and several of these, of a permanent nature, have been established, not only by Canadians, but by organizations in the United States. These camps tend to bring together the young people of both nations in a contact which augurs well for the future. And on the brow of the hill, overlooking the bay, on the site of some of

A magnificent view of the upper Ottawa River—roadside park on Highway No. 17, near Deux Rivières



this continent's oldest historic ruins, stands the Martyrs' Shrine, erected in memory of the missionaries who died at or near this spot three hundred years ago at the torture stake in the service of their God. Within the Shrine repose the bones of these first saints of the Roman Catholic Church in North America.

These, then, are our summer estates, playgrounds set aside by our government for our convenience and enjoyment, available at any moment we may decide to visit them. And those of us who travel to the parks by highway will discover, along the route, other parks—miniatures of the national and provincial parks previously described.

Until recently, highway administrations were content to build highways of a standard consistent with existing traffic requirements for speed and safety, but they have since come to realize that the average motorist demands in the highway of to-day facilities, not only for speed and safety, but for comfort as well. Roadside parks are the latest step in the programme, and the Ontario Department of Highways stands in the forefront of this development, as is attested by the existence of over 200 roadside parks and parklets.

In general, these consist of reserved plots of land along the right-of-way, equipped with picnic tables and benches, outdoor stoves and toilet facilities. They are not cast in a stereotyped mould; each is adapted to the topography of the country and property limitations. Many are but a widening of the road shoulder equipped with a picnic table and bench. Others consist of several hundred acres, and are equipped with such additional features as community kitchens, bath-houses and playgrounds. All have been set up solely for the convenience of the motorist-places where he may turn off the highway to rest from the strain of driving, or prepare and enjoy a lunch amid the scenic beauty of the province; they also present an opportunity for the children, restless from long confinement in the car, to get out and romp. They are ideal breathing and resting spaces on the road to and from the spot chosen for the summer vacation.

Ontario's resources in terms of healthful summer estates are unlimited. They make a vital contribution to the well-being and morale both of the people of the province and of those millions of welcome visitors who come from elsewhere.

A popular roadside park on the Queen Elizabeth Way-Lake Ontario at right





Among the pines at Lake Timagami

A delightful camp setting where Martin River crosses Highway No. 11.



One Spot of Earth

by E. P. LAMPRÉ

"God gave all men all earth to love But, since our hearts are small, Ordained for each one spot should prove Beloved over all."

WHEN Kipling wrote of his fair county of Sussex, he was expressing that instinctive love for some particular locality, some spot of earth, that seems to be inherent in most men, and, in a way, ties them to the mother earth from which they sprang and to which they must eventually return. This feeling can exist without any proprietory interest in the chosen land. It may come from a long family association with a particular locality, or it may be the crystallization of some nostalgic memory of an idealized landscape of childhood, or it may result from the chance discovery of some tract of country, under the open sky, with which one's spirit spontaneously claims kinship.

The country I write about falls in the latter class. I own no part of it and it bears no relationship to the salt marshes and swift tides of the land where I spent my youth or to the prairies and deep woods of later experience. Its attraction is probably, in the main, a distillation of all the days spent among its hills and on its lakes, of weary trails with heavy packs, fall evenings in a snug cabin, and summer nights beneath the stars beside some lake. My only excuse for writing is the pleasure I find in calling it to mind and the hope that either some reader may share this pleasure or that it may wake for him thoughts of his own peculiar spot of earth. Perhaps, also, I am moved to write this as a record of memories shared with a son who has now taken for his own a narrow spot of earth in another country.

As you would not be interested in the exact location of this land of mine, its anonymity will be preserved by my stating merely that it is a hundred and some odd miles from a Canadian city. It embraces

perhaps forty or fifty square miles of wooded, hilly country with its share of lake and swamp and beaver meadow. On the north it merges into the back fields of a settlement where a hardy and persistent breed of farmers wrest a living from their boulderstrewn fields. A road, of sorts, meanders a mile or two within the eastern borders, and in the south there is a large lake with an occasional patch of sandy field between it and the encroaching woods. On the west the boundary is undefined and fluid. Twelve, or it may be fifteen, miles out, there is another road, but between lies a sort of never-never land, many of whose mysteries I shall probably never penetrate.

My country is hilly. In fact, as my girth increases and my wind becomes correspondingly shorter, I have observed that these hills are unequally balanced and contain more of the "up" than of the "down" in their structure. Actually, there is a range of elevation of perhaps seven or eight hundred feet, and in places the slopes are sufficiently precipitous to provide what I flatter myself into regarding as a bit of amateur mountaineering. Years ago this country was covered with a noble growth of white pine, but now, after logging operations and fire have done their work, it carries for the most part only second-growth birch, maple, poplar and red pine, with here and there a stand of mature hardwoods, or an isolated aged pine—like the one at the end of Dark Lake, which, leaning a little against the push of the westerly winds, lifts its plumed head high above the lesser breeds that have now usurped the place of seedlings of its own kind. There are cedar swamps and open beaver meadows, bare hill-tops where the scrubby oaks

anchor their roots deep into the crevices of the rocks, pleasant park-like country where long glades run down to the lakes, and abandoned fields where stout maples are now growing up. Everywhere there is clean walking and relatively little undergrowth no tangled briers or barriers of windfalls so that one can almost "bee-line" from hill to hill, avoiding only the thicker swamps.

In the spring these hills are clothed with the tender and delicate shades of green that have never quite been captured by artist or dyer. These subdued pastel shades are almost as varied as the riotous colours of autumn, in which season the same hills, as an aging woman who seeks to hide the ravages of time, deck themselves in yellows and golds, reds and crimsons, the bronze of the oaks and, for contrast, the deep and unchanging greens of the conifers—in panels and patterns of unbelievable splendour.

Winter—and the hardwoods are etched in grey against the snow, merging into a faint purple on distant slopes. The pines stand out black against the hill-sides, and in the cedar swamps, where the deer are yarding, every branch carries its amorphous load of snow. Then, in the frosty nights, you can hear the wolves howl as their chase weaves around the hills and over the frozen lakes. Always the snow carries its record of the secret life of the woods: the firm sharp track of the wandering deer and its frantic plunge when startled, the dog-like pads of wolf and fox, the reversed tracks of rabbits, and numberless tiny foot-prints whose makers seem to be materialized only by these evanescent recordings, so shy are they and so seldom seen.

There are views from these hills that are breath-taking in their beauty, but you will not find any photographs accompanying this pen-sketch. A photograph, in recording any scene, makes common something which, when held only in the memory, is yours alone. So held, it is recreated in a new form every time you see it; each season of the year, each day, each change of cloud and weather brings with it some new aspect that gives not one or two but scores of pictures

for the gallery of the mind. In this gallery are canvases depicting every mood—delicate spring, lavish summer, the tapestry of autumn, the cold thin lights of winter, bright weather, misty days, lashing rain, windwarped pines, reflected birches writhing and twisting on rippling water, and sudden, swift glimpses of wild things.

Wandering without an objective has never appealed to me, and most of this country has been explored during hunting and fishing expeditions. More often than not, these explorations have been rewarded with no tangible spoils of gun or rod; but always there are the intangibles, which my spot of earth gives with a lavish hand. The sharpened senses and subdued excitement of the hunter add something to an appreciation of the woods that no aimless wandering can approach. Hounds giving tongue on a cold fall morning; the buck pulled down in full course with one clean shot; the doe, just startled by the dogs, pausing to look back, with every nerve and graceful muscle tense, and then speeding away unhurt; another buck peering craftily from the shelter of the swamp and exploding into violent motion as the dogs take his track—all these are things that can scarcely be spared from one's memory.

Hunting is really a meditative sort of sport, involving long patient hours of watching a runway, always alert, but with leisure to savour every detail of the surroundings. There are "watches", occupied year after year, where every tree appears to be an old friend; one in particular—a mighty nave of open hardwoods with gothic arches of interlacing branches, such as might have inspired the builders of medieval cathedrals -has a stillness and solemnity no work of man could equal. At another runway, beside a lake, a great doe once silhouetted herself against the water in a wide-flung leap that has fully paid for many subsequent hours of waiting for deer that did not pass that way.

Fishing is a more active and exacting sport which spurs one on through fruitless hours with the chance of a strike after one more cast. In my domain, if you are not

prejudiced against fish with needles on their backs, you can get your limit of bass in one sweet lake, almost without fail, and then, having acquired your legal quota, do some really enjoyable fishing, with a dull and barbless hook-which provides pleasant and healthful exercise for both fisherman and fish. At another lake the bass are more temperamental and you must work for what you get, but here there lives, or lived, a monstrous fish, the great grand-parent of all bass, surpassing every other in size and cunning. I once brought him to the surface, and since then he has been the objective of many an unrewarded expedition. Of late, however, I have been more inclined toward the seduction of the smooth and spikeless trout, and on one immortal day caught my limit, and maybe a little over, in a breathless twenty minutes when the water fairly boiled with fish. To tell the truth, I felt something of a fish-hog on that occasion, but remorse was tempered by the fact that it has happened only once in more years than I care to contemplate, and stands, therefore, in agreeable contrast to those countless occasions when the moon or the wind was wrong, or the fish just weren't biting. Lake trout are there too, and one hauls in, on incredible lengths of copper line, an occasional monster of ten or twelve pounds from the chilly depths-a sport, however, which is more commonly associated with getting caught on the bottom and reeling and tugging to recover your bait. In the fall, on rocky shoals where the fish spawn, you can see them weaving and darting through the clear waters in mad urgency, their cold and lethargic natures spurred for a brief season by procreative duties.

I have neither the knowledge, patience nor desire to catalogue the birds who decorate my realm. I know, however, that by Molly's Lake in May, before dawn, you can hear a bird chorus like all the angel hosts raising prayers to their God. I do not seek to learn what birds these are-better they should remain an unseen choir. There is an occasional partridge, and a scarlet tanager, whom I meet every summer, has nested for years in an old clearance. There is also a loon that patrols a section of the lake. To me a lake without a loon seems incomplete; its haunting call, mocking and derisive, qualifies as the musical prelude to the pageant of our Canadian woods. Friendly Canada jays follow the wanderer on noiseless wings, industrious woodpeckers and the great cock of the woods hammer and peck, while the noisy bluejay informs all the world that there are strangers in the woods, warning all wild things to "Beware! Beware!".

All these are not the gleanings of any single year, but a composite of many seasons. They were not encountered on easy strolls through sunlit woods, but are the more prized as being the fruit of toil and sweat, heat and cold and rain, the long-endured misery of carrying a canoe on unaccustomed shoulders, the plague of flies and mosquitoes, and, too often, of infinite weariness. These wholesome discomforts, the common lot of our forebears not so many years ago, are not drawbacks to my chosen land but simply the price to be paid for all it gives in health and beauty and in memories that one leafs through like pages of some familiar book in which the story is not yet, I hope, completely told.

"That, as he watched creation's Birth, So we, in Godlike mood, May, of our love, create our earth And see that it is good."

AMONGST THE NEW BOOKS

A Short History of Canada for Americans by A. L. Burt (University of Minneapolis Press, \$3.00)

This is the second history of Canada to be reviewed in this column within the last few months. Both the Dominion of the North and Professor Burt's book are scholarly examples of concise history, brilliantly written, and, to be quite frank, they have gone far toward removing an admitted prejudice, on the part of this reviewer, against books written by professors. While both apparently are directed toward the American reader, the two books differ widely in treatment and may even be considered as complementary, one to the other. Dominion of the North is more particularly concerned with the development of Canada within the Empire, while Professor Burt gives more attention to the effect of American relations, policies and political institutions on Canadian affairs.

Professor Burt was born in Canada and educated in Canadian Universities and at Oxford. For some years he was professor of history at the University of Alberta and now occupies that chair at the University of Minnesota. With this background, he is admirably equipped to write a history of Canada for Americans.

Canada's early history, the period of exploration, the Indian wars and the conquest by the British are excellently covered in summarized form, which misses no outstanding event or notable personality. The American Revolution and the influx of loyalists that followed are treated in more detail. The author suggests a novel interpretation of the war of 1812-14, but ventures no opinion on the moot point as to which side won. This will probably remain one of the undecided issues of history, but, as Canadians, we can be under no illusion as to who won the peace.

The account of the reform movement and the constitutional changes of the first half of the nineteenth century is handled with a fine appreciation of the various geographical, political, and racial factors involved. The story of the post-confederation era up to the first Great War is equally happy, and constitutes a valuable picture of the time.

One of the most useful sections of the book is devoted to a description of Canada's government, her place in the Empire and the relative powers and authorities of the Federal and Provincial Governments. To the American, accustomed to a written and inflexible constitution, the development of Canada to national status within the Empire by a slow process of evolution, with little or no statutory basis, is difficult to understand. Possibly in tracing analogies and differences between Canadian and American institutions, there is a tendency to pass too lightly over the disputes in jurisdiction between the Dominion and the Provinces and the effect of various decisions of the Privy Council on the powers of the Federal Government.

Professor Burt is not too successful in his account of Canada's part in the first Great War. His introductory statement that "Canadian soldiers played a relatively small part in the war" seems less than just, and contrary to the accepted facts of history; while the figures given for Canadian casualities are some 25 per cent below those in the *Encyclopaedia Britannica* and in Professor Wrong's history.

The chapters on the inter-war period are probably the best in the book. These events are so recent that it is still difficult to view them objectively or to catch the highlights and shadows of that period of dazzling boom and bottomless depression. Professor Burt's reputation as a historian could well rest upon his description of these troubled years, which is indicative of his ability to arrange contemporary events in proper perspective. The final section deals with Canada's participation in the present war.

The book is splendidly illustrated with reproductions and photographs. It has an index and a very useful list of books recommended for supplementary reading.

Partner in Three Worlds by Dorothy Duncan (Harper and Brothers, New York, \$3.50)

This book purports to be the story of a Czech refugee, Jan Rieger, who enlisted in the Canadian Army, as told to Miss Duncan over the period of a year or more while he was serving in Montreal and was a frequent visitor to her home. The author assures us that the story is factual throughout, though some of the names have been changed as a measure of protection for persons appearing in the book who are still in enemy territory.

Jan Rieger was born in Prague in the days of the old Austrian Empire and, it would appear, received a quite adequate commercial education. He enlisted in the Austrian Army in the first Great War, earned his commission in the field and was several times wounded. Later he was taken prisoner in Serbia and when, toward the end of the war, the new Czech State came into being, he joined the French Army to help in the liberation of his country.

After the war he entered one of the largest banks in Prague where he was immediately successful and also achieved a reputation as one of the outstanding figures

(Continued on page VIII)

ANNUAL MEETING of

The Canadian Geographical Society

The Society will hold its sixteenth Annual General Meeting in the Lecture Hall, Victoria Memorial Museum, Ottawa, on Tuesday, March 20th, 1945, at 8.30 p.m. Immediately following the meeting, Major-General W. W. Foster, Special Commissioner for Defence Projects in Northwest Canada, and a Director of the Society, will deliver an illustrated address entitled "The Strategic Northwest", which will be accompanied by a sound film in technicolour.

(Continued from page VII)

in the gay night life of the Czechoslovakian capital. His immediate success in these so widely divergent fields of activity is a little difficult to accept at face value. However, this period of prosperity and high living was terminated, strangely enough, by his marriage to the daughter of a parvenu millionaire. On the strength of this alliance he left the bank intending to participate in his in-laws' business. The marriage, however, did not last; his wife went home, and he was reduced to a life of sober virtue as a salesman of railway tickets in Paris. After a brief journey through this financial wilderness, he bloomed again as a salesman and, almost immediately, an expert on fine Bohemian glass. Eventually he was sent to New York to establish a branch of this business, a project which was interrupted by Germany's occupation of Czecho-slovakia, leaving him and a second wife stranded in New York. After various adventures in living in the American way, including a rather noisesome experience as a chicken rancher, he enlisted in the Canadian Army and took the first step toward being immortalized in literature by meeting Miss Duncan.

In spite of certain lacunae and improbabilities, Miss Duncan makes a good and interesting story of the life of this young Czech. One may doubt, however, that she quite qualifies as an interpreter of Europe to America (see slip cover), but she makes a very live and lively character of Jan Rieger, whose acquaintance her

readers will enjoy, even as she did.

Steamboats Come True by James Thomas Flexner (The Viking Press, New York, \$4.50)

The trite proverbial saying that "necessity is the mother of invention" seems to be a proper introduction to a history of the invention, or rather, of the development of the steamboat. Once the steam engine had been invented, its eventual application to the movement of ships was assured, but this event was hastened by the need, on the rapid rivers of America, for some means of moving boats against the current which would be more powerful than the sail, the oar, or the drudging labour of the track line. Britain, with her great navy of sailing ships and her sea-borne commerce, propelled by the winds of wide oceans, felt no immediate need for the development of the steamship, and her early and unsuccessful efforts in that direction were directed toward the solution of a transportation problem similar to that of America, the movement of barges along canals.

Shortly after the close of the Revolutionary War, one John Fitch, an almost illiterate product of the American frontier, conceived the idea of a steamboat, and, working under the handicaps of poverty and even of ignorance of the actual details of steam engines then in operation, built, within a few years, a small steamboat that actually attained a speed of eight miles an hour and operated commercially for a season. Other inventors were also interested, and the state legislatures

and courts were loud with claims and counter-claims and requests for concessions and patents. In England and France, though to a lesser extent, other minds were working on the same problem, but it was not until 1807 that Fulton built the first successful steamboat, The North River, which operated on the Hudson between New York and Albany. Fulton can scarcely be considered an inventor. He was first of all a promoter, masking, with a facade of noble sentiments, an unscrupulous determination to make his way in the world. He drew heavily upon the work of other inventors and was not too careful in acknowledging his debt to them. He had the ability, however, to avoid their mistakes and combine the best of their ideas in a practical and commercially successful ship.

The book is thoroughly documented and evidently the result of an enormous amount of research by the author. It is ably written, but the arrangement is such that, in places, the sequence of events is difficult to follow. This is an enjoyable book which should remove many misconceptions about the invention of the steamboat, and it gives to poor John Fitch, quietly drinking himself to death in a Kentucky tavern, rather than to the self-confident and successful Fulton, the larger share of the honour, if not of the rewards.

> The Great Lakes by HARLAN HATCHER (Oxford University Press, Toronto, \$4.00)

This is one of those satisfying books which give the reader the impression that the author was obliged to write it to fulfil an inward urge to make available to others a story that he himself found of engrossing interest. Classed as geography, it is a popularly written study of one of the most important and interesting regions in the world. As a history it includes much of the struggle for the mastery of the North American continent where the French, the British and the vigorous young American Republic each made its bid for the control of the Great Lakes. Factual as it is throughout, it is not primarily a product of patient research in the musty atmosphere of archives and libraries, but, rather, the author seems to have derived his inspiration from sunlit days on the rolling lakes themselves, with their long procession of ships carrying cargoes of wheat and ore eastward toward the markets of the world: ships that recall to memory the carriers of an earlier day-the bark canoes of Indian and traders, the bateaux that transported the armies of three nations across these lakes, armed fleets locked port-hole to port-hole in deadly battle and the white sails of the thousands of schooners and brigs bringing the immigrants who built, in the short space of a century, one of the greatest industrial civilizations in the world.

The first section of the book deals with the physiography of the Great Lakes basin, the early explorations by French traders and missionaries, the Indian wars and the bitter struggle between the French and the British. Then follows the American Revolution and the equally bitter period of competition for the control of these inland seas between the British and the new-born

American republic. This ended in a compromise which split the St. Lawrence between the two rivals and, unfortunately for the Canada of to-day, gave to the more astute trader, busy and competent and on the ground, the lion's share of the wealth and resources of the basin of the lakes.

Then came the great period of settlement and development: the days of the lumber kings when the great pine forests were fed to the ever-hungry sawmills and the lake fronts were dotted with roaring lumber towns, each tougher than the next. Here, in the deep pine woods, was born in the imagination of the lumber-jacks, the fabulous Paul Bunyan and his blue ox, that indigenous American myth that continues to grow wherever, from coast to coast, the long cry of "timber" rings through the trees.

Next we have the era of settlement, starting perhaps more slowly, but largely contemporaneous with the lumber age, when grain, cattle and hogs, and stout barrels of whiskey were piled high at lakeside ports waiting to be carried east, and the newly-built canals, in many cases, were too small to carry the traffic almost before they were completed. Last of all came the mining period when copper was found in the wooded slopes of Lake Superior, and then iron, not in seams or lodes but in mountains of ore which, joined with the coal and limestone of the East by an easy water route, has been, more than any other single factor, responsible for the industrial pre-eminence of the United States.

This is a great story and Mr. Hatcher tells it well. His long background of research and study does not intrude itself into the narrative, which carries throughout a spirit of urgency, the push and drive of an everadvancing frontier; and always, throughout the book, one sees the long parade of ships, bateaux, schooners, brigs, paddle-wheel steamers, whale-backs and the great ore boats of to-day, and the little corvettes from lakeside shipyards which have helped us to win the battle of the Atlantic.

Atlas of Global Geography by Erwin Raisz (Global Press and Harpers, \$3.50)

Geographers of to-day are nothing if not global in viewpoint, and the present book is an expression of their current concentration on the global aspect of world affairs. The future alone will show whether this attitude will stand the test of practical experience, since there appears to be a tendency to overlook the fact that the bulk of the world's population and resources is concentrated between the middle latitudes. Neither have we, as yet, any assurance that transpolar transportation will be an economic possibility, at least for many years.

This atlas, however, is a very useful and interesting book, and contains a wealth of valuable information in condensed form. The maps, in general, are beautifully drawn on curved projections. In some cases, as on the agricultural map on page 51, the symbolization is difficult to follow, giving the impression that it has been designed for maps on a much larger scale. Statistical information is usefully summarized in diagrammatic form, and there is an illustrated glossary. The selection of colours for the maps is excellent; in fact the whole make-up of the book is such that it is a pleasure to use.

One might wish, however, that a little more care had been given to editing. Even "old sweats" who spent a winter on Salisbury Plain some thirty years ago, would hesitate in placing the rainfall of western Britain at as high a figure as thirty feet, nor can one quite believe that forty feet of rain falls in six months in Assam. The draftsman seems to have had some trouble in remembering whether the "i" or the "y" appears in the first or second syllable of the name Libya, a trouble that, frankly, is shared by many others. The one-hundred-foot tide of the Bay of Fundy is a new contribution to geographical misinformation, and it would be only courteous for our author to explain why (page 21) the diesel engine is so deadly to fish. These are, if you like, minor defects, but are indicative of careless compilation and editing.

On page 23 there is a very misleading comparison between the carriage of goods by ship, by train and by air, which might lead to the conclusion that, for example, the armies of China could be adequately supplied over the "hump" by a few hundred aircraft. There seems no particular need, in a geography, for this comparison, whether misleading or not, and such statements can only detract from the value of a book in which there is so much that is sound and factual.

The Transplanted by Frederick Niver (Wm. Collins Sons and Company, Canada, Ltd., Toronto, \$2.75)

PERHAPS no other writer has so fully caught the romance of the opening-up and early settlement of Western Canada, and given expression to it in such an interesting way as has Frederick Niven. An earlier novel, Flying Years, is a fascinating account of the plains region from Fort Garry to Rocky Mountain House, a saga of some sixty years, coming down to the time of the first World War, packed with history, romance, local colour, and a sympathetic understanding of the country and its people. Another of his books, Mine Inheritance, goes back to an earlier period, centring around the coming of the Selkirk settlers to Red River and the stormy events that followed. The present volume, The Transplanted, is a third tale of Canadian pioneer life, taking us this time into the mountains and valleys of British Columbia. Unfortunately, there will be no further additions to the series, for Niven died early in 1944.

Like the heroes in all three of the above-mentioned stories, Niven came from Scotland. Arriving first in the spring of 1899, he was attracted to British Columbia, worked and wandered through much of it, and came to know it intimately. During most of his time in the province, his headquarters were at or near the town of Nelson on Kootenay Lake, and it is there, on a mountain-side above Cottonwood Creek, that he lies buried. Waterpower...Source of Abundant

CAN HELP PROVIDE MAXIMUM

POSTWAR

EMPLOYMENT

Thanks to an abundance of waterpower, Canada is a land exceptionally rich in electricity. Applied to our great natural rescurces, this electricity can increase the efficiency of our factories and farms and bring new beauty and convenience to our cities and homes.

To reap the full advantage of our heritage of electric power—we must plan its usage now. Without slackening our war effort, we must plan ahead, to make more and more use of electricity in the promotion of maximum employment . . . in the building of a prosperous postwar Canada.



Before and After—Illustrated here is a typical Canadian waterpower site before and after installation of an electric power station equipped by Canadian General Electric.



CANADIAN GENERAL ELECTRIC CO. LIMITED

HEAD OFFICE-TORONTO